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## ST LOUIS, MO. WEDNESDAY, DECEMBER 24, 1902.

# Volume LV., No. 52

rear. Eastern omce, Chaimer D. Coi-man, 850 Temple Court, New York City. Advertisers will find the RURAL WORLD the best advertising medium of its class in the United States. Address all letters to COLMAN'S RURAL WORLD, Chemieal Building, St. Louis, Mo.

the time paid for has expired. To keep constantly increasing subscription allow old subscribers to send a name with their own for one dollar, and to add at any time NEW names at fifty cents each-but renewals without new names are at one dollar a year. We also allow subscribers to club with the wice-a-week "Republic" or the twice-a-week "Globe-Democrat" at \$1.25 a year -thus securing two one-dollar papers at that very low price. We appreciate the kind efforts of our patrons in all parts of the union in speaking good words in behalf of the RURAL WORLD, and it is to these efforts we attribute our constantly increasing circulation.

## INFLUENCE OF PALATABILITY IN

The influence of the palatability of ra-tions in feeding stock is a matter of great importance. It is a subject that has been ignored by the scientific men in their investigations and neglected by practical feeders, particularly those who handle large herds or who follow the "balanced ration" plan. This is largely due to the fact that the experimenter has had his eye on the item of digestibility and has devoted his attention largely to chemical analysis.

ern colleges has gravely stated that corn fodder is as nutritious as corn ensilage. Chemistry is an exact science and the professor has proved his statement to his own satisfaction. The chemical test for What a digestible nutrients shows it. What more do you want? Just one trifling and that is the personal opinion of Cow. Experience shows us that her view is something like that of the soldier boys upon whom Uncle Sam has been experimenting for several years, endeav-oring to find an "emergency ration." That is, one highly nutritious and condensed, which may be carried by the soldier on the march and render him independent of foraging or other supplies. Several attempts at food tablets and condensed ozenges, have been made but so far indifferent success. Chemistry shows that the tablets contain as much meal and wher

There is a gustatory element necessary to health. The individual must enjoy his food and this item of palatability has a direct influence upon digestion. Experiments have been made recently upon of articles sold for bodily consumption.

In the United States courts.

No more vital place of legislation has come before the law-making body for years than this one regulating the purity ments have been made recently upon of articles sold for bodily consumption.

We are hopeful that some compromise between the homesteader and the cattle baron may be made and a permanent truce declared between the two conflicting elements.

pleases their palates.

Physiologists should be able to determine, by careful observation and study, nder oath at the milk pail.

It may be seen when this question is explored, that a healthy hog—cholera It is significant.

t makes a very attractive proposition to winter turf oats,
decided success. In the state or
decided success.

Christian families. So much for
decided impressive part
decided

and this fact should always be borne in mind by seed buyers. If possible, procure seed grown in your vicinity or that is known to adapt itself to your environment.

Seems like painting the filty or adorning the rose. This is its agethetic side.

The little ones think Christmas would not be quite Christmas without the Christmas tree. It would be like leaving ment.

With winter oats it is but a matter of gradual changing from a tender to a hardy plant and this is done by the well-known process of selection and breeding. It remains practically the same variety changes in all its characteristics, except the abil-

g in all its characteristics, except the ability to live through the winter.

Every farmer knows that oats require
is futal to the crop. Spring oats must
be sown early—as early as possible. The
condition of the soil, even when the land
is fall plowed, will often prevent early
sowing and the season of year is a
rushing one and many demands are made
on the farmer's time.

The presence and stand around in big-eyed,
area-struck silence or rush shouting upon
the dangling treasures, they know to be
theirs. The very guardian angel of the
mome hovers about such a scene like a
splrit. It is the Christmas spirit and
this is the sentimental aspect.
How many of us think about the business side of the Christmas tree industry.
Away out on the bleak hillsides the "man
with the ax" has been cutting and piling

for a crop of cow peas, which can be followed by oats again in the fall. If the cow peas are harvested the oats may

the sergeant pops a pellet into the robinlike mouth of a hungry soldier and says,
"There! You've had your dinner," it
would seem that an ideal had been realfaced. It is quite unreasonable for our
faced. It is quite unreasonable for our
faced. It is quite unreasonable for our
faced in boys in blue to decline in health and
for the country and of great importance to the dawn as the faced was weighed and charged against the but to them and every entry disqualified and her
for dwas weighed and charged against the judge "did not know a good to them and every entry disqualified and her
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feed was weighed and charged against the judge "did not know a good to them and every entry disqualified and her
feed was weighed and charged against the judge "did not know a good to the purple of the judge of the salary of the server pound they consumed was
charged at market price and on April 10
when they were sold he knew to a cent
when they were sold he knew to a cent
when they were sold he knew to a cent
when they were sold he knew to a cent
when they were sold he knew to a cent
when they were sold he knew to a cent
when they are the follow sergeant pops a pellet into the robin- the country and of great importance to the time. human food and it is fair to presume and experiment proves that the physical factor is also present in the case of the lower animals, although in a less food and the lower animals, although in a less food and the lower animals, although in the Case of the lower animals, although in the Case of the lower animals, although in a less food and this item of palatability has a lirect influence upon discartion.

There is a gustatory element necessary to health. The individual must enjoy his food and this item of palatability has a lirect influence upon discartion.

dogs showing that the gastric secretions The selfish struggle for wealth has led to the stomach are more prompt and co-ous where the animal is fed some-ning he likes.

A fattening steer, a thoroughbred

The most common form of preserving The most common form of preserving the most common form of preserving the perishable goods is by the admixture of should not receive scientific consideration. We should know particularly, by extensive tests and experiments, just it is not injurious but their testimony is what foods are most preferred by the not conclusive. The opinion of the mansticated animals.

able to deteropen to the same objection of self-inter-

inwardness of this element of The Bureau of Chemistry in the Naindividual taste and tell us exactly how it tional Department of Agriculture is conoperates. We already know by the test-imony of Mrs. Cow that she prefers ensil-age to corn stover and even to green corn fodder and she registers her deposition we can give to our readers the results lows a maximum of thirty acres to each

It is significant that the amendment ofproof—may be produced by giving him
feed he most enjoys, instead of making

This test.

It is significant that the amendment ofthe meat packers protesting
against the prohibition of the use of boraThe homesteader is also given prior cic acid was lost by a vote of 50 to 16. rights in the selection of lands and may a sewer of him.

The fact that Prof. Henry, who has written the greatest book yet on "Feeds and Feeding" does not devote any space to "palatability" in all his 657 pages, shows that this matter has been neglect
ci caid was lost by a vote of so to 16. The year of the greatest is an admission of its general file upon the leased lands, under rules and Feeding" does not devote any space to "palatability" in all his 657 pages, shows that this matter has been neglect
discovered was lost by a vote of so to 16. The year of the upon the selection or in and and may file upon the leased lands, under rules and regulations approved by the secretary of the interior. It is also proposed to give the secretary power to fix the rental price of the graxing lands, acq-

middle ages. It is still a great institution in Germany and England and in the large American cities the celebration of Christmas without the tree would in th Ger the business farmer and an interesting large American cities the celebration of problem to the experimenter. Before attempting an enumeration of the good many thousands of families be considered points of winter oats it is well to state a barren observance. It has been stated that in the northern states they have not succeeded owing to the severe winters. In Kentucky and corresponding latitudes were decidedly heathen. However, the In Kentucky and corresponding latitudes were decidedly heathen. However, the "winter turf oats," as it is called, is a

out of Hamlet. What prettier picture of out or Hamme. What pretter pretter of home-life than the glittering, gift-hung tree on Christmas eve, sparkling with its tiny candle-lights, when the impatient children are ushered breathlessly into its presence and stand around in big-eyed,

ity and has devoted his attention largely to chemical analysis.

This is entirely proper, as the determination of the chemical values of feed is a great task, requiring years of patient study and experiment. Now that we have a fairly firm basis on which to stand as to the relative value of the various feeds employed by the stock man, the knights of the test tube would do well to take up seriously the question of the influence of the individual taste of the animal upon digestibility.

A noted man in one of the famous eastern colleges has gravely stated that corn their sale.

There is still another view to take of

the Christmas tree habit and it is rather a sad one. Hundreds of thousands of disking is advisable.

The writer has five acres in this year, sown Oct. 15th, and so far his year, sown Oct. 15th, and so his year, sown Oct. 15th, and so his year, sown Oct. 15th, and year, sown Oct.

a grazing bill which, it is understood, will norse, and a mileh cow are all animals of seen put on the market and sold to an ensitive nervous organism. They will reflect very quickly, kindness or harsh treatment, regularity or spasmodic feeding and we know in a general way that they thrive better when given food that pleases the treatment of the controversy that they thrive better when given food that they thrive better when given food that they thrive better when given food that they are the controversy that they thrive better when given food that they thrive better when given food that they are the controversy that they are the controversy that they thrive better when given food that they are the controversy that the trol of the public ranges. Mr. Hitchcock, secretary of the interior, now has the bill under consideration and will report his conclusions to Congress immediately afconclusions to Congress immediately at-ter the Christmas recess. "I have not gone over the bill in detail," said Mr. Hitchcock this afternoon, "but so far as I understand its provisions, it meets the wishes of the department. The bill proposes to place the leasing of public lands and the management of herds upon a business basis, and I am gratified at this turn of affairs. The prospect is very good for a settlement of the controver-

> The proposed bill limits the size of the herds that may be placed upon any one tract of land to 600 head of cattle and alanimal. This would make a total of

proves the bill, as now seems probable, an effort will be made to secure its pas-sage by both branches of Congress at the

## NOTES FROM AN OHIO FARM.

Editor RURAL YORLD: Three more days to Christmas and the Farm Notes man has been sick just a week. He has had a kidney trouble since he was 14 years old and about once a year it gets him down for a few days. I wish that his regarded by the expert judge.

A few weeks ago I was looking at some hogs, the property of a young breeder who has started out "to show" men of experience how to do it. Now I towns and country see it and arrange their prices accordingly the better it will be for them. man has been sick just a week. He had a kidney trouble since he was 14 years old and about oftee a year it gets him down for a few days. I wish that some reader would tell me of a cure. My kidneys "go on a strike" occasionally and it takes several days to get them at the seem to be able to do me any good and all the remedy that has seemed to help for ten years falled my this time. We have just had one day with the mercury as low as 14 degrees above zero and many fields of wheat and rye would hide a rabifields of wheat and rye would hide a good.

That is regarded by the expert juuge.

A few weeks ago I was looking at their knitting and have come to sum, their prices accordingly the better it will be for them.

Some of them may have to curtail their sepanses and a few of them may have to log out of business. But there is room for hog breeders has taught me a few things. The young man had a "registered thorough as low as 14 degrees above zero and many fields of wheat and rye would hide a rabifields of wheat and rye would hide a good.

The young man had a "registered thorough with the mercury as low as 14 degrees above zero and many fields of wheat and rye would hide a good.

The young man had a "registered thorough with the more born farmers, it will work no hardship on them, as they know by experience how it is done.

C. A. BIRD.

Vernon Co., Mo.

and who talks with that genial gentle-man upon the details of making a bunch of premium steers, must at once see that he is master of his subject. The teacher must know more than the pupil, and the trained mind of the college professor, combined with a practical knowledge of every detail of the subject upon which he treats must be of practical use to his he treats must be of practical use to his was his herd and he put in all the continuous the road in making fun of farm

the cow peas are harvested the oats may be drilled on the cow-pea stubble without an extra plowing. If the ground is hard, a disking is advisable.

The writer has five acres in winter oats this year, sown Oct. 15th, and so far it looks very promising. The outcome is stately monarch should some day rear its somewhat problematical as the only lead. We need these majure trees for thousands of these young evergreen trees are sacrificed and at the same time John Jones, farmer, may have made a fortune feeding cattle and at the same time John Jones, farmer, may have made a fortune feeding value of corn read a line and did not know the difference between the feeding value of corn and oil meal. He knows that he bought bead. We need these majure trees for \$1.500 for them, and he knows that he stately monarch should some day rear its head. We need these mature trees for many purposes and when they are removed by the judicious process of selection adopted by the National Bureau of Forestry it is the fit ending of a useful ate, nor does he have the contract of the second of the second and the second contract of ence between the feeding value of corn ed in business as a breeder after he had ate, nor does he know that he could have sold his timothy hay for more than his profile on the steers. He knows that he has \$500 more cash on April 10 than he man who took most of the premiums at

declared between the two conflicting elements for their mutual good.

The Nebraska cattlemen have prepared and selling the hay he bought a steer for and selling the hay he bought a steer for \$30 and during the winter fed out the ot be objectionable to the interior de- hay and corn. The steer was nice and fat in April and Uncle Jimmy sold him for \$30. The miller Joked him about his experience and wanted to know where the profit came in. "Why, Henry," said he, "I could not sell the corn and I guess I have the manure anyway." Very guess I have the manure lay for years just where it was made. How many Uncle Jimmies are feeding for the manure and where it was made. How many Uncle
Jimmies are feeding for the manure and
then never hauling the manure away?
That answer of Prof. Mumford to
Question No. 5 was good. "The great
mass of farmers do not yet appreciate
the fact that the various operations of
the farm are taught at the agricultural
colleges," and they are taught so that
they may be put into practice on any
farm in the U.S. This is not saying that

COLMAN'S RURAL WORLD.

\*\*BORMAN J. COLMAN.\*\*

\*\*BOTTORS.\*\*

\*\*WINTER OATS.\*\*

\*\*Published every Wednesday, in Chemical building, corner of Eighth and Olive streets, St. Louis, Mo., at one dollar per year. Eastern office, Chalmer D. Collar per great. Seatern office, Chalmer dependence of physiology and the laws of hygiene are against all such adulterations.

The Christmas tree dates back to the measure probable, an effort will be made to secure its passing purposes. The rental can not be of the measure profits aion of the property for the trail can not be of them a Barred Rock is any kind of a "dominick" bird, or a white Wyandout and its the fr not pay each of 70 members of the to spend \$250 in taking a year at an agricultural college with a view of making a study of poultry alone, but it would pay them well to subscribe \$5 each toward the well to subscribe \$5 each toward the and family when I take the team and expense of sending some bright young man or young woman to college with the understanding that they be paid back by understanding that they be paid back by the minutes' time I can have the same article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the article delivered at my door at from \$50 cornwall. England. What will be the number \$50 cornwall \$50 corn man or young woman as understanding that they be paid back by understanding that they be paid back by whis or her services in selecting their breeding pens and show birds. It is the trained eye that counts in such matters and not your opinion or my opinion; blased by self interest, that we have the best fowls in the whole neighborhood, that is regarded by the expert judge.

The mail order houses have brought their knitting and have come to stay, and their knitting and have come to stay, and

as low as 14 degrees above zero and many fields of wheat and rye would hide a rabbit. Some of my rye would hide a good sized dog. The Ohio river took a rise Dec. 16 and caught several thousands of bushels of corn in the shock. As the wind was high all of this was carried out into the stream and lost.

The first three columns of the RURAL WORLD for Dec. 13th cusht to be left.

Bitting and Judge Frost could have taught that young man anything.

In the past 12 years of institute work of have visited many of the best known breeders of fine stock, and in every case if have found the most successful men to be the men who bought and read according to the property of the property

books and papers. His object was to get our recommendation of a herd of scrub hogs and he failed to do it. He also failhad on Oct. 10, but for the life of him he the poultry show has about every book ighed out to them and even the waste man had every entry disqualified and he

Editor RURAL WORLD: We are go-Currency bill as well as the recommendation of the third assistant postmaster general with regard to the reduction of postage on merchandise. While we can-not yet hope for penny postage on letters, we may very consistently ask our legislators to favor us with a cheap postal package rate. Many a pleasant re-minder of home ties and friendly good-wishes would find their way to absent loved ones were it not for the prohibitive tariff collected by Uncle Sam or his al-

Department, shall have been established, we will have as complete a delivery system as can well be devised for all con-cerned, and to use it for the benefit of the farmers, who pay the bills, would be but justice to say the least. True, this would come in direct competition with the

colleges," and they are taught so that they may be put into practice on any farm in the U. S. This is not saying that everything taught in Missouri can be practiced in California, or everything taught in Missouri can be practiced in Missouri can be practiced in Fiorida, but correct principles are taught and these principles are general in their application.

I was not well enough to attend the Poultry Show at our county seat, but I have reports from it and will make it the public of a talk at one of our institutes.

The detriment of the many.

But that is not all. High as the rates are tountry towns and rural districts, are complaining that a great deal of money is being sent to the mail order houses of the larger cities, that ought to be kept at home in order houses on merchandise is reduced a much greater emount of money will find its way into the tills of the city merchants rather than their own. This, in a measure, is

expenses and a few of them may have to go out of business. But there is room for all of them on the farm, and as a large

Dec. 16 and caught several thousand of the shock. As the business of corn in the shock. As the wind was high all of this was carried out into the stream and lost.

The first three columns of the RURAL wood and was informed that she was good farm, very seedy and hungry were seedy and hungry were seedy and hungry were seedy shown of the years patent hog food once a day, and that she had one-tent of ten pigs and it died one-tent of ten pigs and years of this hog story is truth, friends, and I very much doubt whether John Jamison, Theo Lewis, Dr. Bitting and Judge Frost could have the farmers will travel 10 or that farmers will travel 10 or that farmers will travel 10 or that the pigs and the pigs of the pigs and the pigs of the pig will pass into the hands of men who have learned at the great agricultural colleges to appreciate their value and possibilities of great profits from such lands when properly handled. This is just and necessary. Our population is increasing rapidand the day will come when the coun- always hit it if its a deer and miss it if y cannot afford to have its productive it is a calf. lands occupied by farmers who produce no more than one-third the material for food and clothing that such land should bring forth. The possibilities in life for professional farmer are great and the field broader than any other, says an ex-

## STATE BOARD OF AGRICULTURE.

The annual meeting of the Missouri State Wilkinson, W. L. Bryant, J. J. while the publications of the mending the salary of the secretary be in-

of N. H. Gentry, J. A. Potts, Norman J. Colman, J. W. Hill, Alex. Maitland, A. T. Nelson and H. F. Hand. The officers elected for this Board are N. H. Gentry, President; J. A. Potts, Vice-President; J. R. Rippey, Secretary, and Charles Yeater. Treasurer

## LIKES IT BETTER EVERY YEAR.

Mr. Simeon Viveash, of Pecos, San Miguel Co., N. M., in renewing his sub-scription, writes: "I have taken the RU-RAL WORLD for ten years, and like it better every year. It is the best allround agricultural paper I have seen this
side of the Atlantic, and I have subscribed for a good many other search. al papers, at different times, and none of them suit me so well as the RURAL WORLD."

## MY SYMPHONY.

To live content with small means; to seek elegance rather than luxury, and re- of spraying and various styles and types

NEWS AND COMMENT.

The Patrons of Husbandry will hold their 1904 National Grange in St. Louis The World's Fair City will be the con-vention center for 1904.

and Grades of Cattle" that will be of special moment to young cattlemen Missouri's 1902 corn crop of 307,300,000 bushels was produced by an average of 40 bushels to the acre. This average is larger than that of any other state in the Union. Besides having productive farms, Missouri has large and growing

A leading Chicago paper in an impressive editorial says that the St. Louis World's Fair will be a national surprise. Chicago concedes that the Louisians Purchase Exposition will eclipse in gran-deur and interest the Columbian celebra-

destroy the hyacinth pest in Florida streams has caused the death of many cattle grazing on the ranges bordering on the waters. The trick in spraying is to find a specific poison for the particu-lar pest it is intended to abate. We can't

Turkeys are soaring higher and there are not enough to go round if we could reach them. It is a good time to make up our minds that a turkey dinner is not ssential to Christmas happiness. There are others. Little roast pig, the Missouri hen saute. 'possum and sweet 'taters—oh, pshaw, come to think of it we don't care much for turkey, anyway.

Over 2,300 Farmer's Institutes were The annual meeting of the Missouri State of Over 2,300 Farmer's Institutes were Board of Agriculture was held at Columbia the funds contributed by the different states and territories in this releast states and territories in this held last year in the United States, work amounted to nearly \$200,000, and 7,000 President; Geo. B. Ellis, Secretary; H. H. Banks, Treasurer. The executive committee was increased to seven members, total number of persons reached by the consisting of the President, Vice-President, Vice-Presiden PURE FOOD LAW.

and becomes a flood such as we see in the Brazos region in Texas—the treeless, could not tell you how much of that \$50 is net profit.

The lower house of Congress passed on Oct. 19th, a bill of great importance to the son for use during the ensuing drouthy

and becomes a flood such as we see in the persons annually engaged in agricultural could not tell you how much of that \$50 is net profit.

The lower house of Congress passed on Oct. 19th, a bill of great importance to the son for use during the ensuing drouthy

and becomes a flood such as we see in the persons annually engaged in agricultural could hear of and the poultry show has about every book snowdon Willis, Asst. Secretary; H. the persons annually engaged in agricultural could hear of and the profit.

The ten steers that Dean Waters put on feed of him he to poultry show has about every book snowdon Willis, Asst. Secretary; H. the persons annually engaged in agricultural could hear of and the profit.

The ten steers that Dean Waters put on feed on the low on the was increased to seven members, sold four cockerels at \$5 to \$10 each and consisting of the President, Vice-President, Vice-Presid reach about 500,000 farmers. The need is great for a wider dissemination among farmers of the results of agricultura study and research.

The great Southwest is being s rapidly and from the outlook the colonization of this wonderful region will be unced in the near future which will assist those interested in making a settlement in the Southwest counfry. The advantage of cheap lands, fer-tile soil, mild climate, open winters and a new country appeals strongly to the American heart and the best class of sturdy, enterprising farmers will make up the element who will turn the South-

Mississippi Valley Horticulturists is one just issued by the Department of Agriculture (No. 161) entitled "Practical Suggestions for Fruit Growers." It contains timely and valuable pointers on locations of orchards, varieties, pruning and plant-ing, and tiliage. A considerable portion of the 26 pages is devoted to the question

Department of Agriculture is a new building at Washington. The depart-ment is paying out over \$20,000 a year for rents and the probability is that before long a stately edifice adapted to the needs of the Department will take its place among the Capitol's buildings. We suggest that such a building would acour suggest that such a building would active that is to demand cash it is to demand cash it the little South Venezuela's credit to the breaking point.

However, the idea of ample grounds, such that the little south venezuela's credit is the breaking point. have reports from it and will make it the ubject of a talk at one of our institutes. There were many sad disappointments the expert judge announced the cores. This was due to the fact that nany of the exhibitors are breeding without any definite knowledge of the points the tills of the city merchants rather than their own. This, in a measure, is measure, is nadvance from all the little South American republics. Venezuela's credit than their own. This, in a measure, is nadvance from all the little South American republics. Venezuela's credit than their own. This, in a measure, is nadvance from all the little South American republics. Venezuela's credit than their own. This may not be practicable and the Department would need offices near the capitol in advance from all the little South American republics. Venezuela's credit the methan their own. This may not be practicable and the Department would need offices near the capitol in advance from all the little South American republics. Venezuela's credit the methan their own. This may not be practicable and the Department would need offices near the capitol in advance from all the little South American republics. Venezuela's credit than their own. This may not be practicable and the Department would need offices near the capitol in advance from all the little South American republics. Venezuela's credit than their own. This may not be need offices near the capitol in advance from all the little South American republics. Venezuela's credit the south American republics. Venezuela's cred

Lot I.—6 quarts whole milk, 1-4 lb. lineseed cake.
Lot II.—5 quarts separated milk; 1 quart whole milk; ½ lb linseed cake.
Lot III.—6 quarts separated milk; ½ lb. linseed cake; 2 os. cod liver oil.
Lot IV.—6 quarts separated milk; ½ lb linseed cake; ½ lb. caif meal (oatmeal, 2 parts by weight; cornmeal, 2 parts by weight; flaxseed, 1 part by weight).
Each of the lots receives in addition to the foregoing as much grass and hay as they care to consume. Every week the calves were weighed and according to the latest scale testings, those which the latest scale testings, those which have given the greatest increase in weight, are, as might be expected, the ones fed on whole milk and linseed cake. The animals in receipt of this ration are returned as having made an average gain per week of 14½ lbs. Lots II and IV tie for second place as gaining 12½ lbs. per week. Lot III occupies the last place with an average gain of 11½ lbs. Now these results at first sight seem to dispense the strength with carles of the seem to dispense the strength wilk carle but when courage the skimmed milk calf, but when the relative cost of the various rations is considered it puts on quite another-

The rations naturally varied in cos at different stages of the season but all through, Lot I cost considerably more than double the expense of any of the

When the latest estimates were made when the latest estimates were made
the prices of the various rations worked out as below, and we place alongside
them the average gains in weight per
week and equivalent in U. S. Money.

Weekly cost Gain per week
of food U. S. average
Lot 1 ....48 5½d \$1.07 14½ lbs.

....1s 6¼d

Lot 4 .....1s 6½a .....26½ .....26½ .....27 lbs.
These figures go to show that of all the food rations experimented with, the most economic results were obtained with a daily allowance of 6 quarts of separated milk, ½ lb. of linseed cake and ½ lb of a for draft purposes are larger, coarser, with coarser bones and joints and often great vigor of constitution. In animals that have been selected because of their efficiency in producing milk and butter mixture consisting of 2 parts oatmeal,

2 parts commeal, 1 part flasseed.
This is a most valuable experiment and
I have great confidence in the result, and
I feel sure that any who will try it will re to be more than satisfied.

sure to be more than satisfied.

I wish to add that the separated milk must be from the centrifugal separator, and fresh and sweet, as that is the first principle of successful raising skimmed milk calves.

ROBT. H. PETHEBRIDGE.

SELECTING DAIRY COWS. By F. B. Mumford, Prof. of Agriculture,

Mo .- Address before Mis uri State Dairy Meeting, Nov. 11-13, 1902, Columbia.

In conducting the dairy business at a profit, the most important factor is the

that remain in a fleshy condition while at the same time giving milk are in most cases not profitable dairy animals. Beef animals possess the ability of consuming the raw products of the farm and producing therefrom beef and depositing this between the muscular fibres and in the connective tissue of the body. Dairy animals, on the other hand, possess the ability of making fat from the feed, but this fat, instead of being stored or deposited between the muscular fibres, is deposited in the udder and ultimately appears in the milk as butter fat. Now any animal that possesses the ability to milk. The neck, unlike the beef animal, court at its case of the product of the same time given by the milk are the same time given by the s profit, the most important factor is the selection of the cows that will comprise the dairy herd. It matters not how skill-rul a dairyman may be in handling milk or butter or how good a feeder he may be, if the cows in his herd are inferior home to and low producers, he cannot hope to a profit from his business.

make a profit from his business.

It will not require any argument to convince the average man that there is a very great difference among animals in their ability to produce a given amount of product on the same food. One sheep for example, fed a certain, weighed amount of food will produce six pounds of wool, whereas another animal fed in exactly the same way will produce thirty pounds. Some horses will con-sume a bushel of oats and do very well if they manage to trot a mile in four minutes, while other horses fed the same kind and quality of oats will be able to trot in two minutes. This is not to any difference in the methods of or in the character of the food feed, but it is primarily due to a differ-erence in the efficiency of the animal ma-chine. There are some cows, when fed a certain amount of food that will produce one hundred pounds of butter in a year one hundred pounds of butter in a year; there are other cows, subject to exact-ly the same sort of treatment receiving exactly the same amount of feed that will easily produce two hundred pounds in one year. We must therefore attempt to secure cows that will produce a maximum yield with a minimum amount of

machine and she is a machine that is able to consume the raw products of the farm in the shape of corn, oats, hay, pasture, etc., and make therefrom a valpasture, etc., and make the error a var-uable product, milk; and her value in the dairy herd will depend primarily upon the efficiency with which she is able to bring about this transformation of raw products. The question is, how we able to select animals possessing this desired ability? Is it possible from the external form of an animal to predict in any certain degree the ability of that animal to produce milk and butter from the food consumed? In answer to this estion, it may be said with consider-de assurance, that under certain condi-tions and within certain well known limits we can judge of the value of any animal for the production of milk and

Before going any further, it may be

# General Debility

Day in and out there is that feeling of ess that makes a burden of itself. Food does not strengthen.

Sleep does not refresh. It is hard to do, hard to bear, what dd be easy, -vitality is ca the ebb, and the whole system suffers. For this condition take

Hood's Sarsaparilla It vitalizes the blood, gives vigor and tone to all the organs and functions, and is positively unequalled for all run-down or debilitated conditions.



WELLEY STATELLY

for a great many generations, we always find in the best animals a certain type

GENERAL APPEARANCE OF THE

DAIRY COW.—The general appearance of a typical dairy cow, giving milk in abundance, is angular, thin, somewhat loose-jointed and with prominent bones. In general it may be said that animals that remain in a fleshy condition while

The Dalry

INSHAPLES
Thomas Separator
Th

Thus at the present time, standing as of the animal should be fully developed.

we do at the end of these efforts to improve the domestic animals, and being fine texture, covered with fine hair and proven the domestic animals, and being fine texture, covered with fine hair and the proven the domestic animals, and being fine texture, covered with fine hair and the back, the rump long, high and wide and many authorities favor an arching and many authorities favor an arching pelvis. The pin bones or thuris should be high and wide apart. In many of the best dairy cows, we find the pin bones so high that the line from hips to the setting on of the tall rises somewhat toward the tail. This is undoubtedly a good characteristic. The thighs should be thin, in-curving but well-muscled. It may again be said on this point that all the characteristics here mentioned are of the characteristics here mentioned are of secondary importance when compared with the development of the udder and milking veins of the producing cow. The udder should be large, extending well forward, full but not fiesby; the quarters forward, full but not fieshy; the quarters even. The attachment to the body should be as large as possible, extending well forward and extending up behind. The udder should milk out thoroughly so that when it is empty it will be considerably smaller and very flexible. The milk veins, which may be observed just in front of the udder, should be large, elastic, as crooked as possible and branching. The main milk vein enters the chest through an opening known as

garded as a surer index in a dry cow than the milk veins themselves. (Concluded next week.)

always present. Animals that are selected for speed have small trim legs and deep chests, generally with sloping haunches and are in most cases of relatively small size; on the other hand those animals that have been selected to a higher degree than other breeds that do not give as rich mond, Ind., pleaded guilty in the circuit for dreft nurposes are larger coarser.

This question comes from a dairy farm within ten miles of the office of the "New York Farmer." One man bought

three cows at \$20 per head, a total of \$60

for the bunch.

A neighbor on the same day bought three cows, one for \$30, one for \$30 and one for \$70, a total of \$240 for the bunch.

A third neighbor, who wishes to buy

Which is the cheapest, the \$60 bunch Not knowing the cows or the purchas

ers, we cannot, of course, pass on the question. The best we can do is to compute the possibilities in the case.

We assume that the three \$20 cows are

into the class of cows that average about ,200 quarts of milk per head per year.

"scrub" animals that fall

milk cows, sends us the details, and



Advice to **WELL DRILLERS** 

same rate, would make a net income in two years of \$224. That would mean that they had paid back the \$240 paid for them and earned a profit of \$34 besides. In their third year they would give their owner a handsome profit.

Notice to They can furnish you with Colled Spring wire equal to the FROST, but they do not know how to make it. We originated the genuine product. Send for catalogue and wholesale prices. The Frost Wire Fence Co., Cleveland, Ohio. \$45 WKLY selling ACME PUMP GOVERNORS. They make all pumps work eary and fit all kinds, tiren or wood ! Mills run with by less wind. Agents facultive kerritory. Its Maritie sell it. PUMP GOVERNOR MN96. \* 0, 19 \ '5 O Borstown St. Chrose, II.

noted by the department of agriculture it was found that where cows were milk ed three times a day-morning, noon and evening—the milk was the richest at noon and poorest in the morning, and when LOOMIS MACHINE CO., Tiffin, Ohio. slightly richer in the evening.

hem and earned a profit of \$4 besides.

In their third year they would give their owner a handsome profit.

What will the \$60 bunch of three scrubs what will the \$60 bunch of three scrubs do in the third year?

If our questioner has followed these computations closely, he will be able to figure out pretty closely the answer to York. Dairymen who have definite contracts for definite amounts of milk are the total to dealine amounts of mink are buying fresh cows, and even renting them to keep up the full cans. A sharp cattle buyer is supplying cows to such farmers at a rental of #1 each per moniuuntil the usual farm supply crosses the demand of the market. Various reasons are assigned; rank feed in the pastures made so by the cool and very wet fall, which makes the grass less nutritious; cool nights and frequent pouring night showers; shade grown corn as a soiling crop, possibly low in feeding value, and other reasons that correspond to that of why hens refuse to lay when eggs are high. None of these explain. Milk now brings a higher price than in years past and grain feed is probably 15 per cent more than the past average. I have nev-er seen cows in better flesh and appear-ance than this fall, and there may be an explanation—in part—in this of the shrinkage. Some of my "dairy form" cows are the finest of beef; their gain in flesh has been so rapid during their sixty days' vacation. It is to be hoped that this surplis flesh may later on be account—if for it he measure of the contraction of the state ed for in the messes of \$1.40 per 100 milk.

While it is a critical time for the cows between hay and grass, it is also a very serious period between grass and hay, says the St. Paul "Farmer." The cow NO HUMBUG—3 Prefect Tools in the says the St. Paul "Farmer." The cow that is scrimped between hay and grass will recover when she gets an abundance will recover when she gets an abundance if in the satisfaction of the same will not recover on dry feed until she again comes fresh. Fodder corn, ground feed, or even a little hay to help out on this surplus flesh may later on be accounted for in the messes of \$1.40 per 100 milk.

According to some experiments recently milked morning and evening the milk was





RUPTURE CURED while you work. You pay \$4 when cured. No cure, no pay.
ALEX SPEIRS, Box 824 Westbrook, Maine. My monthly regulator never fails, ladies. Box Free. DR F. MAY, Bloomington





Money

If Page Fence The material, and the labor on it, cost more, and we candidly believe it is better and lasts longer. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

# A Grand Premium Offering.

e Offer to Our Readers One of the Grandest Premiums That Was Ever Presented for Their Consideration.

A \$45.00 Sewing Machine Absolutely Free! Warranted for Twenty Years.

Warranted for Twenty Years.

For months we have corresponded with and visited the leading manufacturers of sewing machines throughout the United states with a view of obtaining a sewing machine perfect in its workings, beautiful in its constitution, and magnificent in its general appearance. As we rejected one machine, and magnificent in its general appearance. As we rejected one obtaining such as machine as we said we must have, and would have to obtaining such a machine as we said we must have, and would have to offer to our subscribers. At last we found what we long had sought, and arra-ged with one of the largest manufacturers in the world to supply us with a Sewing Machine, which we know is the best that can be obtained, and is the most beautiful we have ever laid our eyes upon. Of course we had to have a name for this machine, and one appropriate, therefore we have called it "RURAL WORLD," thatbeing the same name as this paper, and we trust and believe that it will be received into the homes of our subscribers as acceptably and satisfactorily as is Collany's Rwall, and as our paper has been received during the past fifty-four When we saw we will sity even the Mhen we say we will give you the

"Rural World Sewing Machine" Absolutely Free

we mean by that you need not pay any cash for it unless you so de ire. It is our intention and desire to increase the circulation of COLMAN'S BURAL WORLD from 50,000 within the next few months. This we can easily do it we have the assistance and co-operation of our subscribers. We do not ask them to add us in bringing this about without a generous reward, and intend that they shall be well repaid for their eff. "16.

MACHINE is guaranteed for twenty of RULAL WORLD SEWINGMACHINE is guaranteed for their many of the service in its workings, that you have ever seen. If within the next wenty years the machine does money.

MACHINE is guaranteed for twenty years. At is perfect in its workings, the handsomest, smoothest running and easiest operating machines that you have ever seen. If within the next twenty years the machine doce the guarantee we make, we will take it off your hands and return your money.

It is not machine we send you the following attachments: Ruffler, Under Braider, Quilter, Foot Hemmer. Tucker, Thread Cutter, and four Hemmers of assorted widths.

It is not four Hemmers of assorted widths.

It is not the saw that is known as a double lock stitch—that is, it us stwo threads, which are kept under the center of the goods, forming a per-

head is handsomely designed, well proportioned and beautifully ornamented. The needle bar is round, made of steel and finely finiahed. The straight and self-setting. The bobbin-winder is the new automatic pattera, and is perfect in its workings. The principal bearings are case-carried in a fitted, the feed is double, extending both sides if, the needle, and is positive in its action. The santitle is cylindrical in

WE WILL SEND YOU OUR "RURAL WORLD" SEWING MACHINE FOR

10	Subscribers	at	50c	each				15	Subscribers	at	50c	each	and	\$12.50	Cash
35	**		50c	66	and	\$ 2.5	io Cash.	10	66	44	50c	64	6.6	15.00	61
30	44	6.6	50c	6.0	6.6	5.6	00 44	3		64	50c	61	66	17.50	66
25	44	66	50c	44	4.6	7.6	90 "	18	44	4.6	50c	818	44	19.00	64
90	44	46	30c	66	6.6	10.6	00 "								

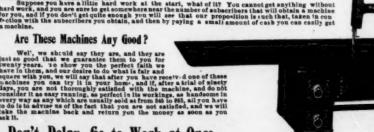
or the \$240 bunch? Which purchase ought I to imitate?"

The state of these elegan: sewing machines for \$28.80. If you have alread, paid your year's subscription, and would like to have one of these machines, we will make you a special price of \$19.85.

Description of the "Rural World" Sewing Machine.

You can have the machine as follows: Oak, highly polished, with plsin finish and beautiful grain, or Oak, marquetry shish, as shown in the cal. This finish is copied from the ancients, who, when they desired to embellish some particular pieces of substantial wood, would inlay it with precious woods of different colors, reproducing vines, flowers, bids, etc. The reproduction on this one shows a beautiful scroll work in colors, and makes one of the meet beautiful strictles of fare nure you were saw. The fulsh has all the appearance of having been installed with precious woods; the tracings around the handles beautiful strictles of fare nure you were saw. The fulsh has all the appearance of having been installed with precious woods; the tracings around the handles machine in plain or marquetry finish.

Now let us have a little neart to heart talk. You know you can't get something in this world; as the old saying is, 'There is no great reward without some labor." We make you the best proposition that you ever had to get a seeking machine. All you have to do is to take this cony, or any other copy of Celman's Runal. World, without some labor." We make you the best proposition that you ever had to get a seeking machine. All you have to do is to take this cony, or any other copy of Celman's Runal. World, without some labor." We make you the best agriculture; has you were the continuous and the best agricultural paper in the southwest; that it's editor has subhished it for fifty-four years; that he is or. Secretary of agriculture of the United States, and one of the highest relating of bees, loggically and the subhished the subhished the continuous subhished the subhished the





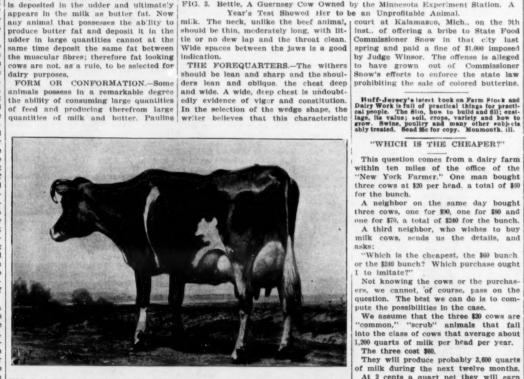


FIG. 1. IMP. COMASSIE 11874.

Breed. able to observe the results of careful se- of an orange yellow color inside. The lection through long periods, we are able to see that animals which produce any with healthy oily secretions observed on certain product in abundance have associated or correlated characters that are

Test, 16 lbs. 11 oz. Butter in 7 Days. Champion Cow Island of Jersey for Five Years. Ancestor of Many of the Most Noted Animals in the Jersey

FIG. 2. Another View of Comassie, Show ing a Wonderful Development of Dairy

shaped when viewed from above. That is, the withers are sharp, and the dis-tance through the heart is large, thus giving us the wedge shaped appearance in front. When viewed from the side, the large pelvic regions and udder are so much deeper than is the depth of the forequarters that we have also a wedge shaped appearance from the side. Then if we look down upon these animals we set that the hips are wide and that the lines drawn from the hips to the with-ers converge, thus giving us the third wedge shape when looked at from above. A mistake is sometimes made, however, articularly in viewing the wedge shape from the side; it must not be supposed that shallow forequarters are desirable, but the wedge shape should always be brought about by the increased depth of

1,300 quarts of milk per head per year.

The three cost \$60.

They will produce probably 3,600 quarts of milk during the next twelve months.

At 2 cents a quart net they will earn \$72 in the year.

# **Horticulture**

HORTICULTURAL TALK

It is none too early now to begin prun ing the fruit trees. Go through the orchard very carefully, give each tree a cording to its needs,

Very little trimming will be necessary

for apple orchards that have been prun ed in the past; some may need only the removal of one or two small branches, yet this may mean a great deal to the future of such trees.

A careful observer can usually locate such limbs or branches that would, short time, interfere, and it is important that such should be taken out soon as noticed. This and the removal of suckers is about all the trimming nec sary to apple trees.

Apple trees should not be headed back

the peach. By the purchase of new land I hav come into possession of about 50 fine ap-ple trees, just in their prime, that were practically ruined by such treatment. The owner, a year ago, gave them the same treatment he gave the peach trees

being tested. In this way these

Pear trees should be pruned as little as possible, with one exception; that of old Kelffers that have been exhausted by necessary.

Simpson of Vincennes, Ind., noticed in his orchard, near Parkersburg, Ill., a peculiary of the second and expensive apparatus necessary. on the market, if salable at all.

By being severely cut back such trees will usually put forth new, vigorous will usually put forth new, vigorous growth, and in a few years produce nice, large fruit. As proof of this I would call your attention to an occasional tree in such orchards that has been almost

broke down, yet to-day, if you will notice, they are the most valuable trees you have in the orchard; notwithstand ing that nature's job of pruning them was not very neatly done.

The Keiffer should be thinned by hand

Grow it well or not at all, applies to all fruit, but particularly to the Keiffer pear,

and in doing this pruning is a very important factor.

Other varieties of pears should be

pruned only to the extent of taking out dead limbs and occasionally one that is an obstruction to cultivation, or injured

and see the limbs are not too dense; then in spring after fruit has set, if there is likelihood of an overproduction, it is well to thin by cutting back the fruiting branches the same as is done with the

Cherries should be trimmed while sma!! and should seldom be touched with shears or saw after they get old enough to bear, as such treatment is very injur-ious to them.

Trim the quince into shapely bushes, avoiding that brush pile appearance so

If you get around to the peach trees before the danger period is over, go ahead with them. See that they are open in the center, take off about two thirds of the past season's growth from main branches, especially those having a ten-dency to grow upward, provision being dency to grow upward, provision being made to allow the tree to spread and grow larger. If buds go through the winter in good shape they will most likey be too numerous for good results and chould be thinned with the shears. I consider that I am earning big wages

every day that I can manage to get into the orchard with shears and saw; and the work is just fun for me. It is a pleasure to me to picture in my mind just how that neglected orchard just purchased will look a year hence.

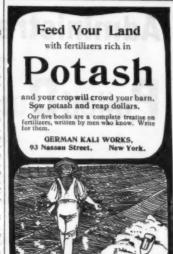
quality of the grapes does not show what it would be in a normal season (without the leaf-hopper pest). You seem to have forgotten my first report on these conditions, and therefore think the quality of my last two grapes sent of rather poor or later a fresh crop of spores may be my last two grapes sent of rather poor quality. (N. B.—For the same given rea-son, the Stark Star was far behind its standard quality, which is fine.) Of course you gave your candid opinion

of the grapes as you found them, without into consideration the conditions under which they were grown, for which I thank you heartily. I don't wish any undue praise for them. I shall also not send them out for trial unless I am perfectly satisfied with their behavior, etc., here, and perhaps they will never leave my place, as they were not produced on speculation for money. I am not blind to-speculation for money are money and the money are money and the money are money send them out for trial unless I am perjudge. Hoping to be favored

tinuance of correspondence, I Very truly, JAS. BACHMAN." The first specimens received being so excellent in quality was probably the cause of my oversight in calling attention to the leaf-hopper injury, both at that time and later. Mr. Bachman has received the high honor of a congratulation upon the production of his new grapes, from Mr. T. V. Munson of Texas, the world's greatest authority on grapes. EDWIN H. REIHL. North Alton, Ill.. Dec. 16, 1902.

in the history of the bitter-rot fungus when the orehardist will have an oppor-tunuity to combat this pest in any other

way than by spraying.



Spraying during the summer by repeated applications of Bordeaux mixture will keep the disease in check mixture will keep the disease in check but will not eradicate it. The winter stage of the dease may be attacked by pruning three tested thereon, and will be of interest to me if nothing more. who may profit by my reports of the deense may be attacked by prunnew varieties tested thereon, and will be of interest to me if nothing more.

In cases where orchards have been was not made until July, 1902, it is beneglected, there are always trees that should have a number of large limbs removed; in such cases the work should be done gradually, for if done all at once, the check will be too much for the trees. Take out those interfering the mest the lieved that a rigid inspection or trees during the winter season will eventually wipe out the disease; at least the summer spraying process will be much simplified. A brief outline of the discovery of the bitter-rot canker will be of inter-

should be resorted to. If such treatment should prove fatal to some of them, what of it? They are of little or no value as they are with their small, knotty, insignificant to bitter-rot infections. Prof. Blair and Dr. Burrill of the University of Blair and Dr. Burrill of the Juversity of the state of th Illinois visited this orchard the following day, and Mr. Simpson communicated his observations to them. They extended his observations, and proved the relation of the canker to the bitter rot. The following three days, further verifications were made in the laboratory of the dea such orchards that has been almost partment of horticulture at Salem. Ill. prof. Blair then returned to Champer fruit.

You felt badly at the time those trees roke down, yet to-day, if you will nothe public the following day, telling of this discovery, and advising the removal of the canker, as a means of preventing the bitter rot of apples. Further information and data were gathered and on July 29th, a bulletin was issued, giving if possible, but if it is too big a job that information regarding the can

the following is a summary of this bulletin and should be given careful attention

LOSSES CAUSED BY BITTER ROT .-Bitter rot is a disastrously destructive disease upon the apple fruit. It has pre vailed at times over very large areas of the territory of the United States, but is specially liable to occur south of the 39th parallel of north latitude. In Illi-nois in 1900 the loss in four counties was estimated to be \$1.500,000 and as great proportionally to the acres in orchards elsewhere

APPEARANCE OF DISEASED AP-PLES.—The disease on the fruit can be PLES.—The disease on the fruit can be easily identified. It begins in one to many brown specks anywhere upon the unbroken skin of the apple and each

point of infection enlarges se come a very distinct, dark colored, circu-lar and somewhat sunken spot, beneath which the tissues are dry (never soft and watery) and tough. Great numbers of pustules so small as to be scarcely vis-ible to the unaided eye, arranged in coose concentric circles cover all but the outer border of the discolored spot and give to the surface a roughened appearance. In is his knowledge of soil chemistry. the surface a roughened appearance. In is his knowledge of soil chemistry. The very dry wenther these pustules are special needs of his fruit crops at different stages of their growth are some-points, but when the air is sufficiently thing he needs to know if he would promote each conically shaped point opens to be best results. For although in this country commercial fertilizers cannot and discharges a little pinkish mass of a mucilaginous or waxy substance well of grain crops, their judicious use may seen under a lens. This material may yield tremendous profits in the production of fruit. But a knowledge of tne ened crust. Each spot may remain diswork is just fun for me. It is a pleasure to me to picture in my mind just
how that neglected orchard just purchased will look a year hence.

AN EXPLANATION.—An interesting
letter was just received from our Arkan
does not further decay.

The prepar

and Explanation.—An interesting letter was just received from our Arkansas grape originator. Mr. Bachman, part of which I feel it my duty to give here: "When I sent you my first sample grapes I called your attention to the fact that our grape vines were prematurely defoliated by the enormous swarms of leaf-hoppers and under this condition the grapes, especially late varieties, could not properly ripen. consequently the quality of the grapes does not show what it would be in a normal season (without the leaf-hopper pest). You seem to have produced from the mummies and from the limb cankers. The former more of-ten fall from the tree. The first infection of the season apparently comes from the cankers and can be traced on the young apples spreading below these in cone-shaped figures in the trees, where the spores have been carried by rain. The disease goes slowly from tree to The disease goes slowly from tree to tree in and orchard, probably through the

on the apples. This can best be done from an elevated position like the plat-form of a spraying outfit. If diseased apples are found the infecting canker (or mummy, should be looked for just above mummy, should be looked for just above the uppermost of the spotted fruit. The canker, and injected fruit should be re-moved, taking care not to distribute the infection in the process. This is of the utmost importance if the contagion is to

be stopped.

In the winter time the mummles and cankers can be removed or the fungus probably destroyed by spraying the trees

THE ADVANTAGES OF A HORTICUL-TURAL EDUCATION TO THE YOUNG FARMER.

Fruit Trees 17 Peach, \$1.00.
50 Concord, \$1.00.
1000 Maiberry, \$1.00
Immense stock, fine quality, low prices. Freight prepaid on \$10.00 orders. General catalogue from the index of Lamps and their Chimneys, the index to Lamps and their Chimneys, the index of Lamps and the in Read before a meeting of the Mississippi

actical value.

The prospective farmer, then, needs an agricultural education, and if he will be principally a fruit grower, he should specialize in horticulture. But it is still objected by some, that the farmer's occupation is peculiarly different from most others in that the farmer's boy grows up in the business, as it were, so that when he is of mature years he is already conversant with its various operations. Still, those who raise this objection will dmit that they themselves, are much better farmers now than when they com-menced business twenty, thirty or forty years ago. The knowledge and strength which they have gained by long years of painful experience it is the purpose of the today should know which he cannot possibly learn by his own experience. His horticultural education gives him the benefit of the life work of hundreds of hard working scientists.

Let us see what some of the things are which the horticulturist can investigate much more thoroughly, correctly and

knowing as much as possible about set structure and various activities of the plants with which he will constantly have to deal, and of having just as thorough scope can one study in detail the deli-cate cell structure of a leaf and the action of its stomates, or follow in its tion of its stomates, or rollow in the course through the leaf tissue the slen-der mycselium of the apple scab fungus, der mycsellum of the apple scab fungus, which saps the leaf cells of their nourshment. After a microscopic study of ome such fungus, both in its obscure regetative and its conspicuous reproduc-tive stage, one cannot fall to be perma-mently impressed with the necessity of praying for fungous diseases of plants before these diseases appear on the surof the feeding roots of a tree, one sees obviously enough why it is that larger results are obtained from the application of fertilizer well out from the trunk than close to the foot of a tree.

The yield of all crops is very largely oportionate to the available water sup-y. With fruit this is especially true cause of the succedent nature of the al product. The fruit grower, therefore, needs all the information he can get as to soil physics. He must know how to manage his land to make it take in the most water that it can store with-out injury to crops, and hold that water ready for use in time of drought. He must know the effect of drainage on soils of different character, and know where to locate drains and how to lay them to produce the effect desired. Is it not wiser for the prospective fruit grower to study his soil physics at a University equipped with apparatus and the data from extensive experiments for demon-strating clearly the truths he is seeking, than it is for him to go at it blindly by himself, learning slowly by costly experience?

cation of different fertilizers is necessary in order to use them most economically and without in any way damaging either but try me. I have furnished my treat-

and the most difficult to study witho teachers and a laboratory equipment Spraying has now become a stern nessity for the successful horticulturist. but the knowledge, not only of preparing but the knowledge, not only of preparing spraying materials, but information as to machinery and methods best to employ, and circumstances under which spraying and circumstances under which spraying by one or two bottles. At all druggists. nderstood. In a horticultural education the young farmer gets at the foundation of the matter, sees the work done by experts and with different sorts of apparatus and learns both the how and the why. The insects which injure fruit, their life

# What is the brightest name in method nurserymen and officials at fruit exhibits classify pears in three groups on the basis of the season of American story?

MACBETH's is on THE BITTER ROT IN WINTER.

The approaching winter will be the first n the history of the bitter-rot fungus

WINT copper suppnate.

The disease can be kept in check during the summer by repeated applications of Bordeaux mixture.

If you'll send your address, I'll send you

equipment of the man who expects to accompilsh something in any business. It is most important that one study something and study it thoroughly; but the education is doubly useful if the studies thave a direct bearing on one's intended occupation. The farmer for instance, equipped with a classical education, has grounds, the horticulturiststudent studies and it is in a great assistance of the spraying and the neat appearance of the trees. On the experiment station of the trees, on the experiment station of the spraying and the neat appearance of the trees, on the experiment station of the spraying and the real appearance of the trees, on the experiment station of the spraying and the real appearance of the spraying a occupation. The farmer for instance, equipped with a classical education, has a well trained mind ; but the farmer with an agricultural education has not only the mental training but a knowledge of fruit, in such a thorough manner as the mental training but a knowledge of the model of the mental training but a knowledge of the model of the m These, in brief, ave some of the ways tion, similar to the Warder classification in which a farmer is benefited by a hortinger of apples, could easily be invented for cultural education. Are not these benefits a substantial advantage to him? In

effect, the horticultural education crowds effect, the horticultural education crowss into a space of four years at the beginning of a farmer's business life, the most important lessons which many years of experience could teach him, and many dar Pomologe." Thus, following someessons which would otherwise surely escape him. By these he is allowed to pro-fit throughout his whole life instead of during only a few years at its close.

IN THE ONION COUNTRY.

Editor RURAL WORLD: We live in

help is so scarce. We can hardly get chelp here for love or money.
We have in this swamp about 70,000 bushels of onions, stored for winter's ly market. Some growers expect \$1 a bushel of but I do not think they will reach that point. Corn is 50c; outs 30c, wheat 75c, hay \$10 per ton, potntoes 50c; everything is on the upward tendency and these are urely good times.

I will write you some time telling how

A VOLUNTEER RASPBERRY

Editor RURAL WORLD: The fifth of fovember, 1902, we had the last berries icked from a raspberry bush that had een bearing regularly all summer; the oush is a very large one, many of the anes are from ten to twelve feet long ines are small bunches with clusters of berries at each end of every branch. The canes, or vines do not die down as on throwing out more branches along the first that grew up in the spring from the root. We think it a valuable berry, but how we came by the bush is a myster grape vines, and as the raspberry-bush was not in the way it was left to grow where it first made its appearance. It is now three years old, but this is the first summer we have noticed its perpetual bearing qualities although it may have borne last summer without our notice We have laid down several of the vine and they have taken root nicely, so we will have several bushes to set out next spring, but we would like to know how and by what means the bush came to

be growing there. Where did it con first place? The berries are as large and fine as any of the black-caps, sweet and juicy. We will keep watch of the bush next summer and give you a de growth and the amount of berries it bears next summer. We think it a valuable berry, but would like to know where it came from, as erries but none that have ever produce berries all summer as this one has, and

## How a Penny May Cure a Sick Friend.

Simply write a postal card telling m who needs help. Tell me which book to Spend but that penny to aid your sick

tinct or several on one apple may run the effects which likely follow the appli-

ment on just those terms in hundreds of

Book No. 1 on Dyspepsia
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Box 525, Racine,
Wis.

circumstances and abilities would allow in the field of systematic pomology. I can take up the subject again therefore

without much apology or preamble There are two different classifications of ripening—summer pears, autumn pear and winter pears. At other times on ees these fruits divided into two group the Japanese hybrid pears and common pears. The Japanese hybrids are those like Kieffer, Garber and Le Conte; and the other group comprises all the rest of

the other group comprises all the rest of the pears—thousands of varieties—of purely European pedigree.

These classifications are convenient and useful as far as they go, but they do not go far enough. It would be highly desirable to classify our pears according to the natural groups or types, but nobody in America seems to know enough about pears to do that yet. The only other plan would be to adopt some purely formal, artificial or arbitrary classifica-tion, such as Dr. Warder provided so suc-cessfully for apples. Such a classification

equipment of the man who expects to ac- orchard, a science and an art in itself. though not perfect, and far from final,

Although the writer does not preten what the outline of Lucas' classification, but influenced still more by Dr. Warder's work on apples, I have prepared the following tentative outline for an artiflcial classification of pears:

1. Form.-The pears may be divided i Editor RURAL WORLD: We live in an onion country. The crop this year pears; those not tapering toward the stem. (2) Obconic pears; those tapering machine, which is quite important as help is so scarce. We can hardly get constricted into a neck. (3) Pyriform fruit, as follows: (1) Round or oblat pears: those having a visibly neck. (4) Irregular pears: those marked-y irregular and not conforming to any of the foregoing classes.

II. Season.-Each of these four class may be divided into three orders accord-ing to the season of ripening of the fruit, be divided into three orders accord e., summer pears, autumn pears and pears.

III. Color.-Each of these twelve or ers may be divided into three groups ollows: (1) Uncolored fruit, I. e., fruit which is pure green, or, when ripe, pu yellow. (2) Colored fruit; suc. as is marked distinctly with red in the sun. (3) Russeted fruit; such as is distinctly marked more or less with russet.

Following this outline we may readily analyze any number of varieties into 36 groups; and these groups may be further subdivided by characters of calyx, basin. te., into many smaller sections if one' onvenience seems to be served thereby Just to show how this works

Summer.

b. Autumn. Green or yellow.

2. Red. Russett-Merriam.

3. Russett-Bergamotte d'Esper

Green or yellow-Bloodgood. 2. Red-Buffum, Manning's Eliz abeth.

Green of yellow-Ontario, Ur baniste, Comice.

2. Red-Flemish Beauty, How II. Seckel.

Russett-Hardy, Angouleme, Sheldon c. Winter.

1. Green or vellow-Lawrence

Red-Clairgeau. Russett-Anjou, Dana's Hove Pyriform.

. Green or yellow-Brandywine

Jargonelle. Red-Tyson, Giffard, Clapp, Bartlett.

b. Autumn. 2. Green or yellow-Dix. Onor

daga. Red-Louise Bonne de Jersey Russett-Bosc. Souvenir

Esperen. Diel.

Gree nor yellow-Vicar of Winkfield. 3. Russett-Winter Nelis.

V. Irregular. Red-Goodale

These varieties are classified as shown ing the scheme, and not as a result of will soon become amenable to right treat be profitably employed in the production of grain crops, their judicious use may yield tremendous profits in the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of soils and of plants and of the production of fruit. But a knowledge of the chemistry of the pears themselves, it would be a real service to pomology if some one who has access to a large collection of varieties of pears would work out such a classification as this for the production of fruit. But a knowledge of the pears themselves. It would be a real service to pomology if some one who has access to a large collection of varieties of pears would work of the pears themselves. It would be a real service to pomology if some one who has access to a large collection of varieties of pears would work of the pears themselves. It would be a real service to pomology if some one who has access to a large collection of varieties of pears would work of the pears themselves. It would be a real service to pomology if new queens usually accompany the same than the production of the pears themselves. It would be a real service to pomology if new queens usually accompany the same than the production of the pears themselves. It would be a real service to pomology if new queens usually accompany the same than the production of the pears themselves. It would be a real servi

> W. J. Stiles, a leading fruit grower near Sandoval, Ill., received three first prizes and two seconds on five plates of exhibited at the horticultural Louis. His orchard, which joins the northern limits of the town of Sandoval is considered one of the best in the State.

# The Aplary

HANDLING BEES

In handling bees, if one wishes to avoid

tremely meager, and the two seldom correlated. According to the most usual course the cooler the weather, the more



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careful one must be to avoid the propolis parting with a snap and a jar. Most all arting with a snap and a jar. Most all nanipulations of the hive should be done

n warm weather, and in the warmest part of the day if possible. WORLD'S PRIZE CORN. All quick motions should be avoided also, in working with bees as they are more apt to attack anyone moving quick-ly or dodging about than one who moves slowly. One should avoid trying to han-dle them when very hot and sweaty, too, as they are more apt to sting when

sweaty, and the stings are more liable to have a bad effect. The greatest means of avoiding stings however, is the proper use of a good smoker. The theory of smoke is to frighten the bees and make them fill up

with honey, when they are comparative-ly harmless. Only enough smoke should be used to accomplish this, as too much smoke will run them off the combs or out of the hive in which case they will be harder to handle. determined to care for them right, he should get them into frame hives with good straight, worker combs, and then if above merely for the purpose of illustrat- Italian queen for each hive, when the

ment. Directions for introducing the

It is doubtless impossible to write struction that would enable a novice to handle bees perfectly without some pra tice. But by keeping the main principles in mind a little practice ought to enable one to overcome his nervousness, and

meeting held in Anna recently. He holds meeting held in Anna recently. He holds meedals received at the Pan-American Exposition at Buffalo. He will be one of exposition at Buffalo. He will be one of the factor of the exhibitors at the World's Fair in St.
Louis. His orchard, which joins the few bees. Every farmer, and a great many in towns, too, for that matter could keep a few hives of bees perhaps.

If they were "built that way" but according to our observation they are not. A great many people do not like honey or bees either. Some cannot stand a sting at all; such ones never will take any in-terest in bees. But to such as do take an interest, and like to work with bees these hints are respectively offered.

CLASSIFYING PEARS.

Our American pomology has suffered seriously in recent years for the lack of thorough work in systematic classification, says F. A. Waugh in the "Co, Gent." I have urged this matter repeatedly, and have myself done all that my circumstances are suffered to take a cover of the suffered to take a cover of the suffered to take a cover of the solution taking the brief of a super or cover, it should be pried up slowly and carefully with a screw-driver or similar tool, using care to get the close of the honey season. While it is now fresh in our memory just at the close of the honey season, which colonies have done the best business in storing surplus honey, the proper thing to do is to requeen all colonies that in any way have inferior. lace's Farmer."

In order to take a cover or super off without giving the hive a jar, the pressure should be applied slowly, gradually increasing it as the propolis or bee-glue begins to give. This propolis will appear to hold the cover or frame against the pressure, but if one watches closely it

perior stock in the way of queens, and it we are careful to buy from such breeders we get quite an improvement on our pres-ent stock. Those who breed in a care-less manner charge about as much for queens as the first class breeder, so that nothing is saved, and much is lost by not getting the best of stock. On the im-proved methods of introducing queen we seldom lose a queen, and the amateur can succeed as well as any. If bees are kept at all it will pay to thus keep them right, and keep only good stock, just as our breeder would do with ordinary stock.

A first class queen adds fully half to the value of any colony at any time of the year, and first class queens will not cost but little in comparison to the price of a colony. If we are careful to keep a record of all queens during the past year, or the past honey season, it enables us to know just what is what, and we colony without thus keeping a record of their work and it is easy. can speedily make the change without their work, and it is easy.

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I Can Sell Your Farm



# Live Stock

TEXAS FEVER

Dr. L. C. Tiffany, assistant state veter narian of Illinois, is prepared to make report of his investigations in regard to the nature of this disease and its causes.

interpretation of the word, but is infectious through the medium of ticks. In certain portions of the Southern states cattle are infested with ticks, which, as is the custom of all ticks, pass their enis the custom or all ticks, pass their en-tire adult life upon the animal infested, and, upon arriving at maturity, fall from the infested animal, deposit their eggs upon the ground and die. In from about upon the ground and die. In from about fifteen to a greater number of days, depending upon the condition er, these eggs are hatched, producing the young ticks, which, in turn, infest cattle which may come in contact with them.

KINDNESS IN STOCK om this it is apparent that cattle bearfrom this it is splitted upon railway cars, shed them upon the floor of the car, and the process of incubation is there conducted, if the temperature of sumcleaning and disinfection of cars which have transported Southern cattle during the warm season should not be underestimated, for, if only one mature female tick should escape destruction, serious results might follow, or if the young ticks have made their appearance and are not destroyed serious results will certainly source of the property of the if native Northern animals come

occur if native Northern animals come into their presence.

"The process of hatching of course, is the same upon pastures, in stock yards and in pens, but the public stock yards in which Southern cattle are handled have a portion of their alleys, pens and scales set apart for the exclusive use of such cattle, and so long as such plan is reliefly followed by the employes of every successful dairyman. The such cattle, and so long as such plan is reliefly followed by the employes of every successful dairyman. The rule is just as important with the farmer who wants protein for stock.

WHY CATTLE DIE. strictly followed no danger exists.

nois during the period between February 1 and November 15 under special permit from the board for immediate slaughter of separating, yarding, weighing and handling there was such that no proba-bility of infection to native cattle passing through those yards existed, and that infected cars must have been the origin

the federal authorities will prohibit the movement of cars, which have transported Southern cattle below the quarantine line, north of the line, for any purpose whatsoever, except the transpor-tation of Southern cattle, unless such cars are thoroughly cleansed and disin-fected, the danger of tick fever infection will be materially lessened.

"This, it would appear, can be easily prevented, and I believe the railroad com-panies would be grateful if such restrictions would be applied, as cost of disinfection is far below the damage arising

"Another source of danger of infection lies in what appears to be a loose system of issuance of permits to import Southern cattle into other states. Illinois, as already stated, requires that each ship-ment be reported to the secretary of this board, with certificate of disinfection. Some other states do not have this re-

## DATE CLAIMS FOR LIVE STOCK

Claim dates for public sales will be

MRS. VIRGINIA P. JOHNSON, ---mx. March 3, 1903—Combination sale of jacks, jennets, stallions and mules at Smith-

BERKSHIRE SWINE.

Jan. 26-27th.—Combination sale of Herefords, Kansas City, Mo., C. R. Thomas, Feb. 3.—Biltmore Farm's annual sale of

Berkshire brood sows, Blitmore, N. C. HEREFORDS. January 28-31, 1903.—T. F. B. Sotham,

Herefords, Kansas City, Mo. January 28-29.—Combination sale of Herefords at Chicago 12-17, 1908.-C. W. Armour and

Jas. A. Funkhouser, Herefords, Kansas January 28-29.—C. A. Jamison and others, Peoria, Ill., at Chicago. February 10, 11, 12, 1902.—C. A. Stannard and others, Herefords, at Oklahoma

February 24-26, 1908.-C. A. Stannard and , Herefords, Kansas City, Mo. 13-14th.—Combination sale of ords, Kansas City, Mo., C. R.

May 6-7, 1966—Colin Cameron, Herefords. Kansas City, Mo.

ANGUS.

April 7-8, 1908—W. C. McGavock, Mgr.,

Aberdeen Angus. Kansas City, Mo.

SHORTHORNS. February 2, 1903-pranstetter, Robertso & Wright, Vandalia, Mo ry 10-11.—Col. G. M. Casey, Clin-Mo., and T. J. Wornall & Son, Lib-

erty. Mo., at Kansas City. January 12, 1903-I. Novinger & Son,

Pebruary 17.—D. K. Kellerman & Son, Mound City, Kan., at Kansas City. February 18-9.—I. M. Forbes & Son, at

Calf Scours Hood Farm Cured Digestive Powder do the work. Severest cases cured Each Remedy, \$1; large (four times dollar times)

conducted, if the temperature of summer exists. The importance, then, of cleaning and disinfection of cars which have transported Southern cattle during the warm season should not be underestimated, for, if only one mature female title to the summer of t tures are rarely profitable to keep. They are invariably poor, although they may consume more feed than it will require to keep a gentle and contented animal. to keep a gentle and contented animal.

Man is not the only animal that worry consumes, says B. P. Wagner in "Pacific Homestead."

year on a hillside orchard of gravelly loam soil in Ontario county, where winters are usually much severer than they

cattle, and on danger exists.

uthern cattle are admitted into Illiluring the period between February

November 15 under special permit

the board for immediate slaughter

the board for immediate slaughter

ber to a fence and pound her into submisfrom the board for immediate slaughter at plants where unloading can take place at their own chutes, and where such cattle are not driven upon any public highway. So also special permits are issued to responsible parties for the importation of Southern cattle, for feeding or grazing purposes, providing unloading can take place on their own premises and no public highway or ground used. By the terms of all these permits the holder thereof is required to thoroughly cleanse and disinfect all cars so used before removal of the same from the unloading chute, and report the fact to the secretary of this board, giving the number and initials of each car unloaded and date of disinfection. Cattle imported for the purpose of feeding or grazing are placed in strict quarantine, and the holder of any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly disinfect the cars and for any damage arising from failure to properly sion with the milk stool before every however, that feed, but before her "pa-tient and considerate" owner went away she got sundry kicks and blows. Of course she grew up a runut. Anything but runty, scrubby stock would seem out ance of the husking. There were perhaps

but runty, scrubby stock would seem of place on this man's farm.

It would be next to an impossibility for him to raise horses. A colt under his care would be rulned before it was old enough for breaking. If not then, it most certainly would, should he attempt most certainly would in the form of the previous year (which with real to get planted) and a large slough it falled to get planted) and a large slough it f old enough for breaking. If not then, it most certainly would, should he attempt to break it. Of course he has horses, but they are of the old, worn-out type. The new animals he buys may be in good condition, but he soon takes that out of them. An intelligent animal soon learns but diver's ways and knows what is extended.

sity of being on friendly terms with the flock, that any farmer who is not, and his temper is such that he cannot, get on friendly terms, with them, had better sell out. He will never succeed in sheep raising. If, as all flock owners know, it is of importance to keep dogs and such worrying and searing anymals away from the successionally do. The binder might we assist gather weeds that a man with a can kinder wheel and reject.

There are also accounts of the disease being produced by cattle being turned in to glean after the shocks were hauled in the successionally do. The binder might we consistent with the same of the corn fodder, but since then one occasionally do. The binder might we assist gather weeds that a man with a can kind with a successionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The binder might was consistent with the same occasionally do. The consistent was consistent with the same occasionally do. The consistent was consistent with the same occasionally do. The consistent was consistent with the same occasionally do. The consistent was con is of importance to keep dogs and such worrying and scaring animals away from the flock, how much more so it is that the one they must look to for care and protection should not be an object of fear and annoyance to them. The dog on the farm can be an intolerable nuisance or the most valued assistant of the farmer, and trained with patience it depends upon the farmer himself which it shall be. A cur should not be kept on any farm, but if a young dog is taken by the farm. arm, but if a young dog is taken by the ing, I believe, from South Dakota.

farm, but if a young dog is taken by the farmer and trained with patience and kindness, it will become of inestimable worth. It is better by far to shoot a dog than ill-treat him.

Fattening animals should be always kept as quiet as possible, and in no way frightened or excited. The man who can pass among his animals and be followed about by them, or who is able to go up and pat one of them, will generally be a successful feeder. His kindness to his

ERS' ASSOCIATION. successful feeder. His kindness to his stock saves feed and adds many to the income from his business as a feed

Kindness to animals may not be natural some men. There is more or less of the tyrant in most men's natures, and unless it is held in check it will show itself with the creatures under his authority, and, like many bad habits, it grows and develops. But the same may be said of kindness to animals. This habit may be acquired as well, and it will pay any

HOME-GROWN PROTEIN.

Fat-forming foods-corn and corn fodever with us where to get protein, the

quirement, issuing a general permit with no official supervision. From this one may conclude that a carejess shipper might not disinfect a car, and it goes back into the regular traffic, with serious results before the error is discovered, perhaps operating in Illinois, as perhaps, occurred this season.

"In investigating the recent outbreaks the number and initials of all cars which had transported cattle among which the disease had occurred was secured; also, the number and initials of all the cars that had brought Southern cattle into Illinois this season under special permit, and, upon comparison, not one car in the latter class was involved in any shipment in which the disease occurred. This proved completely that the voor waster of least the voor of the state of only two bushels per acre could add four and one half million dollars to the farmers wealth; an increase in the average value per head of all the cartie of your readers know that lard mentals and power of the State to only five dollars will address the meeting and we hope to have a large attendance from all parts of the state. Missouri farmers and breaders have the opportunity of placing this state in the very front rank in a divestigations with alfalfa, cow-peas and investigations with alfalfa, cow-peas and proportion the class that the opportunity of placing this state in the very front rank in provent the component of the state. Missouri farmers and breeders have the opportunity of placing this state in the very front rank in provent the concept of the state. Missouri farmers and breeders have the opportunity of provent Live Scotch production. Will they do live it in the discass the meeting and we hope to have a large attendance from all parts of the state. Missouri farmers and breeders have the o Illinois this season under special and almost as much as dried breward, upon comparison, not one car in the latter class was involved in any shipment in which the disease occurred. This proved conclusively that your system of issuing permits is eminently practical and ingrementation of thirteen pounds of corn silage proved both practical and economical when fed in practical and

safe, and is to be commended to other Northern states. With the regulations suggested, adopted and enforced, the danger would be minimized."

EVINDARISE IN STOCK PARSING. KINDNESS IN STOCK RAISING.

A quick tempered man is never a successful stockman, and no more is a fidgety, nervous man. No one can handle stock and get the best out of them who is not in the confidence of the cut-ofquire naturally drained soil, and it is useless to plant them on clay loam. But even crimson clover, although considered a Southern crop, has done well year after

## WHY CATTLE DIE.

The time of year draws near when we may look for more or less trouble cattle dying in the stalk-fields. Their death is usually ascribed to one or more of the following causes: Indigestion death is

them. An intelligent animal soon learns his driver's ways and knows what is expected of him; but this man's horses, when he happens to be out of sorts, are jerked, yelled at and beaten until the spirit is out of them and they become but old plugs. Such teams cannot accomplish half the work well cared for and kindly treated horses will do.

The man whose hogs receive nothing but kicks and blows will never succeed in the swine raising business. The man who is not on the best of terms with his sows will lose many litters of pigs, if not the sows themselves, that he might have the sows themselves, that he might have the work the sows themselves, that he might have the work the sows themselves, that he might have the work the sows themselves, that he might have the work the sows themselves, that he might have the work and kept them out. A neighbor turned some stock in this field the last the work the sows themselves, that he might have the work and kept them out. A neighbor turned some stock in this field the last the work were the work well cared for and kindly treated horses will one. saved had the animal not been afraid of him. And if she distrusts him it will bring out all the viciousness of her nature whenever he comes near to feed or care for her, and in her trampling and care for her, and in her trampling and some weed grew on that breaking which safer for her, and in her trampling and worrying some of the little fellows will be sure to get hurt. Sows with pigs too to actile. There was doubter sexular rates:

January 9, 1903—Polied Durham cattle, Disp. sale of herd of late G. W. Johnson, at Lexington, Mo.

A sheep will never do well unless kind. A sheep will never do well unless kindly treated. They are the most timid of
farm animals and will suffer most if attended by one whom they fear or distrust. In fact, so important is the necestrust of helegon factorisms are the sum of the corn fodder, but since then

Announcement and program of the sixth annual meeting of the improved Live Stock Brieders' Association, held under the auspices of Missouri State under the auspices of Missouri State Board of Agriculture, to be held at Springfield, Mo., January 6-8 1908, Tuesday, Wednesday and Thursday,—State
Poultry Exhibit January 6-8.—Special
The Two Great Factors in Cattle Breed

railroad and hotel rates.

The sixth annual meeting of the Improved Live Stock Breeders' Association held under the auspices of the Missouri farmer to cultivate. Unless patience and kindness are given stock, no man has the right to be master of it.

proved Live Stock Breeders' Association held under the auspices of the Missouri Stote Board of Agriculture will be held in Springfield, Mo., January 6. 7 and 8. in Springfield, Mo., January 6. 7 and 8. 1903. This will be the first meeting of the association held in the southern part of the state, and the farmers and breeders of that section should avail them-

The men who have consented to address the farmers and breeders of Mis-souri at this meeting have increased the value of the herds of the state, not only \$5 but twenty to fifty times five dollars The farmer should attend this meeting for the benefit he may receive from the experience of the successful breeders and for the better opinion he will have of his native state by reason of what he may learn of what others have done. The breeders should attend the meeting not only to contribute to its success but to extend his acquaintance with the farmers, which should result in mutual benefit to both

Every one interested in poultry either fancier or in producing eggs and poultry for the market should attend the meeting and get acquainted with the breeders and spend a day or week of pleasure and profit in studying a busiess that is adding twenty million dollars ness that is adding the state every year.

Don't fail to read this program. Don't fail to attend the meeting. Remember it will be in the beautiful city of Springfield where a hospitable welcome is extended to all. Reduced railroad and hotel

FIRST SESSION .- Tuesday, January Address of Welcome-Hon. J. E. Mel tte, Mayor of Springfield, Mo.

Response by representative of Poultry Response by representative of State

Response by representative of Swine eeders' Association. Response by representative of Good Roads' Association. Response by representative of Improved

Livestock Association. by representative of Sheep eders' Association. desponse by representative of State Board of Agriculture.

SECOND SESSION.-Tuesday evening January 6-7:00 p. m.

World's Fair Session The Importance of Showing as Well as Being Shown, by Hon. J. O. Allison, New London, Mo., member Missour ouri's Part at St. Louis World's

president Missouri Commission. Missouri Live Stock at St. Louis World's Fair, by Hon. N. H. Gentry, Sedalia, Mo., member Missouri Commission.
Agriculture and Horticulture at the Exposition, by Frederick W. Taylor, St. Louis, Mo., Chief Department of Agri culture, Louisiana Purchase Exposition

on by others present ary 7-9:30 a. m. The Value of the Swine Breeder to the Swine Feeder, by W. L. Addy, Parnell,

Mo.
Discussion led by A. F. Russell, Fillmore, Mo. Development of Breeding Stock, by J R, Young, Richards, Mo

on led by J. M. Turley, Stotes bury, Mo. by D. Ward King, Maitland, Mo.

Best Application of Our Road Laws, by

FOURTH SESSION .- Wednesday, January 7--130 p. m.

The Importance of Reliable Pedigrees and the Influence of Responsible Breeders, by E. E. Axline, Oak Grove, Mo.

Discussion by Geo. W. Null, Odessa,

Treatment and Feeding of Pregnant Sows, by M. E. Anderson, Lathrop, Mo. Discussion by J. C. Canaday, Bogard,

The General Interest of the United States Government in the Improvement of the Public Roads, by Hon. W. B. Discussion.

FIFTH SESSION .- Wednesday. Jan-

Sotham, Chillicothe, Mo. What the University of Missouri is what the University of Missouri is Doing for the Farmer, by Dr. R. H. Jesse, President University, Columbia, Mo. Student Life in the Agricultural College and Lessons in Agriculture from Experiment Station (illustrated by magic lantern views), by F. B. Mumford.Pro

SIXTH SESSION .- Thursday morning A Student's Opinion of the Missouri Agricultural College, by J. M. Doughty,

Sheep Feeding, by Hon. Jacob Zeigler, Clinton, Ill. Farmington, Mo. The Profitable Classes of Cattle for the

Farmer to Raise, by John Gosling, Kansas City, Mo. The Modern Farm Cow, by W. P. Har

SEVENTH SESSION .- Thursday, Janu The Value of Improved Live Stock for the Farmers of Southern Missouri, by

ing (Environment and Heredity), by Benton Gabbert, Dearborn, Mo. Discussion Lessons from Cattle Feeding Experiments, by F. B. Mumford, professor of agriculture, College of Agriculture, Columbia 410.

EIGHTH SESSION.-Thursday, Janu-

enter readers know that lard melted and poured over the back and hips of a calf or colt, and well rubbed in, is a sure cure for scours? Apply as hot as can be borne. Don't think this remedy worthless until you have tried it. Ther you will use no other. F. A. NICHOLS Mokane, Mo.

CATTLE NOTES

The well-known proprietor of Sunny ope, Home of Herefords, Mr. C. A Starnard of Emporia, Kans., writes us to make a change in his advertisement Mr. Stannard has one hundred large Eng. lish Berkshires for sale, besides 189 reg istered Herefords. Both cattle and hog are first-class in every particular and are doing exceptionally well.

No little interest is manifested in Here nent that Charles W. Armour of Kansas City, Mo., and James A. Funkhouser of Plattsburg, Mo., will have a public sale of Hereford cattle at Kansas City, Mo. January 14 and 15. These gentlement stand for all that constitutes Herefords of g ehllethtaEatu ½2Actv2½(m4 on Dv of highest excellence and breeders always appreciate the splendid merit of their herds. They will offer the crean of their stock, consisting of sixteer grand young bulls and twenty-three cow and helfers of individual excellence. The imported section of the sale have been chosen with the greatest care and offers the market for new blood and founda-tion stock. The imported females are in calf or have calves at side. It is safe to predict that Messrs Armour and Funk oused will have a most satisfactory sale as regards the animals offered, the grati-fication of their customer's purchases and the receipts.

Mr. R. D. Ross, Carthage, Mo., wil sell a draft of 39 head registered Berk-shires at Kansas City, Mo., horse sale pavillion on January 22, consisting of half and half stallions and mares, about ne-half blacks and the rest grays in co one-mair blacks and the rest grays in cor-or. Mr. Ross assures us that this affair is of excellent quality, good legs and feet and a very desirable lot from start to finish. Anyone wanting a good Percheron or mare should send to Mr. R D. Ross, Carthage Mo., for catalogue and then attend this sale and buy a horse or mare at one-half what you would have to pay for the same animal at private sale. This, too, bear in 4 onDin'eatoao sale. This has been the rule and no doubt will be duplicated at this sale We want you to attend this sale and see if we are not right. Mention where yo saw this ad.

The disposition sale of Palo Durc Percherons, the property of Messrs. Han-na & Co., Howard, Kans., at Kansas City. Mo., Dec. 19, was a success. The offering was of good condition and the attendance was good. Nine stallions, ranging in age from yearlings to 10 year old, brought \$5 130, an average of \$570.; 21 mares and fillies brought \$6.590, an aver age of \$313; 30 head brought \$11,720; aver

ST. LOUIS NATIONAL STOCK YARDS Market Report Furnished by Evans-Sni der-Buel Company.

NATIVE CATTLE.-Receipts of cattle in the native division were light and com-posed mainly of butcher stuff, stockers and calves, of which very few were sold there being not enough transactions up-on which to, base quotations. Shipping and export steers—Best ntaive beef steers strictly fancy 1300@1,700 lbs \$5.25@46.75; choice export steers, 1,300@1,600 lbs., \$5.0 @\$5.75; good shipping and export steers 1,300@1,600 lbs., \$4.50@\$5.00; fair to medium shipping steers, 1,300@1,450 lbs., \$4.5@\$44.65 Dressed beef and butcher steers—Steers 1,200@1,290 lbs., rough to best, \$4.00@\$6 00 steers, 1,000@1,190 lbs., \$3,75@\$5,75; steers less than 1,000 lbs., \$3.00@\$5.00. Cows and helfers—Fancy corn-fed helfers \$4.25@\$5.25; good to choice helfers. \$3.75@\$4.50; good The Work and Value of the Swine fat grass helfers, \$3.25@\$3.75; fair to good grass heifers, \$2.85@\$3.35; best corn-fed heavy cows, \$3.262\$4.00; good fat medium-weight cows. \$2.656\$3.00; medium fat cows, \$2.356\$2.65; heavy-weight canners, \$3.35@\$3.75; fair to medium feeders, 700@ \$2.00; common and shelly cows, \$1.00@\$1.50 Bulls-Choice corn fed bulls, \$3.75@\$4.00; good lambs and sheep with values 15@25 good fat bulls, \$3.00@\$3.50; sausage bulls, \$2.50@\$2.75; good qualitied thin dehorned bulls for feeding \$2.60@\$2.85. Veals and heretics-Choice veals, 100@150 lbs., \$6.25@ at range of \$3.50@45.50, with the bulk of heretics, \$2.75@43.75; thin heretics, \$2.000 at range of \$3.50@45.50, with the bulk of sales going at \$3.90@44. Stockers sold at \$2.50 Stockers and feeders—Good to \$1.50@43, cull lambs at \$2@44, and bucks choice feeders, 1,000@1,500 bs, 41.00@44.25; sold at \$2.25@43, principally at \$2.50@42.75. Sales also included Mexican yearlings at \$4.25. \$8.0048.00; tair to medium reeders, 1006 \$800 lbs lbs., \$2.0068.25; good qualitied stockers, 6006750 lbs., \$2.25682.50; fair qualitied steers, 6006750 lbs., \$2.25682.50; good to choice stock helfers, \$2.25682.50; good to choice stock helfers, \$2.25682.50; common stock helfers, \$2.50682.75; common stock helfers, \$2.25682.50; common stock helfers, \$2.25682.50; common stock helfers, \$2.25682.50; dehorned and unbrand-trading was active and values steady to stock helfers, \$2.50@\$2.50; dehorned and unbrandhelfers \$2.00@\$2.50; dehorned

of excepting about 5 carloads of steers. The supply was good for Saturday, and following the mean markets early in the under the circumstances, with values reported practically steady on all classes of offerings. Receipts for the week were of onerings. Receipts for the week week week 653 cars. During the week Texas and Indian Territory steers averaging 623 to 1.328 lbs., sold at a full range of \$2.40094.30 most of them going at \$3.10033.90. Cows and heifers brought \$1@\$3.60, the bulk at and neiters brought signs.00, the bulk at \$2.369\$2.75; stags and oxen at \$26\$2.40; bul's \$2.406\$3.30, and calves at \$36\$12 per head, the bulk geing at \$26\$10.50. SHFEP—The sheep market was quiet as usual on Saturday. No good mutton

der, ordinary hay, etc.—are easily produced or procurable. The question is ever with us where to get protein, the lowing program it will be seen that some devoted to the interest of the State Poul-

# Administrator's Sale

# Polled Durham Cattle

# January 9th, 1903,

...CONSISTING OF ...

# 35 Head of Double and Single Standard Cattle,

of both sex, property of the late G. W. Johnson, Lexington, Mo.

HIS herd was founded regardless of cost with the intention of making it one of the leading herds of the West, and the entire herd will be sold on above date at rarm, Will also sell to highest bidder one Registered Percheron Stallion, Romulus, 18274, nd one large black Jack, (Missouri Rattler), both premium animals.

# MILE EAST OF LEXINGTON, MO. For Catalogue, Address

Mrs. VIRGINIA P. JOHNSON.

Administratrix,

COL. R. E. EDMONSON. AUCTIONEERS. LEXINGTON, MO.

# ARMOUR-FUNKHOUSER

Public Sale

Imported and American-Bred

# 114 **HEREFORDS**

Wednesday and Thursday. January 14th and 15th, 1903. Fine Stock Pavilion, KANSAS CITY, MO.

The Imported Herefords comprise seventy-five (75) Cows and Heifers and a few choice young Bulls, making the greatest number and grandest lot of Imported Herefords ever offered at any one sale.

The American offering consists of sixteen (16) promising young Bulls and twenty-three (23) Cows and Heifers of unexcelled merit.

A rare opportunity to secure new blood and foundation stock.

We give you our assurance that the highest class of Cows and Bulls each herd affords, can be had at this sale.

Write for catalogue CHARLES W. ARMOUR, JAMES A. FUNKHOUSER,

Kansas City, Mo. Plattsburg, Mo.

Sale held during week of Convention National Live Stock Association. Reduced rates on all railroads.

# ACK-LEG-INE

Pasteur Blackleg Vaccine ready for use. SEPARATE.

Single Blacklegine (for common stock): 10 dose box, \$1.50; 20 dose box, \$2.50; 50 dose box, \$6.00. Double Blacklegine (for choice stock) \$2.00 for 10 doses, first lymph and second lymph inclusive. Blacklegine Outfit for applying Blacklegine, 50 cents.

Pasteur Vaccine Co., CHICAGO - NEW YORK - FT. WORTH - SAN FRANCISCO.

# ..HEREFORDS..

600 HEAD IN HERD.

YOUNG STOCK FOR SALE.

CUDCELL & SIMPSON, INDEPENDENCE.



Sunny Slope Herefords and Berkshires.

189 Registered Herefords for sale, consisting of 24 cows from 3 to 7 years old.
35 two-year-old Helfers.
37 one-year-old Helfers.
37 one-year-old Helfers.
25 Helfer Calves, 8 to 9 months old.
86 Balls, 8 to 39 minth old.
100 Large English Berkehires for sale consisting of 60 Boars of serviceable age and 40 Sows fr m 6 to 16 months old.

better. The week closes with a good SCOTCH SHORTHORNS. earance and a strong demand for higher than the close of last week. So far this week the sales included lambs that sold at \$4@\$5.70, the bulk at \$5@\$5.50. Native and Southwest mutton sheep sold

at \$5.60@\$5.90; pigs at \$5.60 roughs and culls at \$5.60@\$5.85. The top of the market was \$6.92%, and the bulk of the hogs above 150 lbs. average sold at \$6.05@\$6.25, against a top of \$6.35, and the

ulk at \$6.05@\$6.20 on Friday. CHORTHORN CATTLE and large English Berkshire Hogs, all registered and of the verbeat of breeding. Write me. J. E. BURGESS Rolls, Phelps Co., Mo.

THE name of SAM W. COX mas appeared to the readers of Colman's Rural World longer than any live-slock breeder in Shorthorn Castle, 18th list has been considered in Shorthorn Castle, 18th land China Heaville 18200 in use. Up-to-date Poland China Heaville 1820 from choice Flymous Rocks. Write bim Renam Tou want saything at South Greenfield, Mo., on E. O. & Pr. S. branch of Frisco System. Shorthorn Cattle,

ENGLISH Red Polled Cattle.

Ruse blooded and extra

ane stock. 19 Your orders solicited.

L. E. HASBUTINE, Dorchester, Freeze Co., Me L. DAYTUN, Orange, Lawrence Co., Mo., G. Galloway's Poland Chinas, B. Plymouth Rocks, Choice Cockerels \$1.00 each now. Eggs in season,

C. A. STANNARD, Emporia, Kansas, F. L HACKLER, Lee's Summit, Mo.

H. W. KERR, BREEDER OF RED POLLED CATTLE.
Good vouns bulls for sale. Carlinville, III. AUCTIONEERS.

R. L. HARRIMAN. ..Live Stock Auctioneer...

Sales made anywhere on the continent. Thorography post d in pedigrees, quality and values. The mest approved and up-to-date methods. Have perfect and pat onage among leading process. Terms low. Write me before fixing



J. ZACK WELLS, Stock Auctioneer, Sweet Springs Sales made anywhere on earth. Correspondence Solicited.

W. D. ROSS

OTTERVILLE, MO.
Live Stock Auctioneer,
Your Patronage solicited. Terms reasonable. SHORN HORN BULL, 28 head from 19 to 18 mo W. H. H.S FEPHENS & SON, Bunceton, Mo

erkshire Hogs, Angora Goats, Light Brahma and olden Seabright chickens. Stock and eggs for sale all on or address. J. J. LITTRELL, Sturgeon, Mo.



## Horseman



is the greatest horse-breeding ountry of the world-has 3 500,000 horses 14 to the square mile, bred chiefly fre government stallions under governmen

Regularity in watering horse stock du g the winter season especially is just essential as regularity in feeding. Colts that do not have plenty of pure water will not thrive, no matter how liberally they are fed.

The sensitive, excitable colt in proper hands can be made steadygoing, tractable and reliable or he can be ruined as easily as the blowing out of a candle. It only needs a quick-tempered trainer that will be harsh in language and rough in hand-ling, and the ruin will be complete.

The drawing out of the horse market of dicted drop in values. Horses are selling in all the leading markets for better prices than they were bringing a year

manufactured from Indian ponies will be new viewpoint. sent to Japan for the use of the Japanese

cleaned out with a hook. Where this is done there will be far fewer cases of nail prick, for it is a very common thing for a nail to lie alongside of the frog, or in the cleft, doing no harm until the horse happens to tip the nail in pawing; then it is stepped upon and the mischief is done. This exercises the state of the state

"Horse Breeder." Such mares are usually full of vim and snap, owing to the un-usual amount of nerve force which they ess, and this is the most important of all speed factors. Many of the most ssful dams of performers and producers were naturally so "high strung" and nervy as to be comparatively useless for either track or road. Green Mountain Maid, the dam of Electioneer was one of

Don't allow the brood mares to drink a Don't allow the broof finares to drink a large quantity of ice-cold water at any time, as copious draughts of such is liable to produce abortion, says the "Horse Ereeder." They should be watered three times daily even if the days are short and the weather cold. The farmer who has but one or two mares that are with foal will find it profitable to carry water to them in a pail in zero weather, and take the chill from it each watering time by the chill from it each watering time by the chill from it each watering time by adding a little hot water. Colts that do not have access to warm spring water brought to the stable or paddock by aqueduct will also do much better if the chill is taken from their drinking water.

have been clipped often get sore eyes because they cannot keep the files away from their heads. If the foretop is permitted to grow, the hair will brush off the files every time the horse shakes his head, and I have often tied a rag to file brow band of the halter when horses have been minus a foretop, as the shaking of the rag answers the purpose pretty well. It is crueity to deprive a horse of his means of defense against files in the summer time, and I always make a difference in the price I offer for horses that have their foretops frimmed off."

A horse is ac apable of understanding

his treatment. A horse knows when he is line. In touching on the pedigree of Cres his treatment. A horse knows when he is interested and when he is ill-treated; he also knows his friends and his enemies. An injury done a horse "Where Speed Comes From." In no case will be remembered by him for does he show where speed comes from, years and will be treasured up and rebut simply undertakes to show that it sented when opportunity presents, al-though a long period may have elapsed Belle, by Scrugg's Davy Crockett, had themselves on the perpetrators of cruel-bred to Mambrino Chief produced Mamty to them years after the occurrence, brino Howard. What the opportunities



650



On the other hand a horse will evince his satisfaction and pleasure of good treat-ment, and he is especially capable of appreciating praise for good work he has performed. A horse or other intelligent animal must understand what is required of him, so must a human being.

drawing out of the horse market of s for the British army in South has not brought about the pre-drop in values. Horse are selected as the common belief that the earning capacity of the race horse is far greater than of the trotter is not borne out by the turn statistics of 1902. Hudson & Gatcomb's stable of horses were 1871 in the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is far greater than the common belief that the earning capacity of the race horse is a second to the common belief that the earning capacity of the race horse is a second to the common belief that the earning capacity of the race horse is a second to the common belief that the earning capacity of the race horse is a second to the common belief that the earning capacity of the race horse is far greater than the common belief that the common The common belief that the earning ca statistics of 1902. Hudson & Gatcomb's I am confident that at the time Lew stable of horses won \$57,115 in the Grand Clienti between July 15th and November 1st. This is more than was won by such prect stoken as the same of the same than the lst. This is more than was won by such great stables as those of August Pelmont, W. C. Whitney, James R. Keene The excellence of the stock breu by say.

A. L. Eshbaugh, Festus, Mo., demonstrates his ability in his special line. He guarantees stock to be all represented and asks the public to investigate his which \$67,540 was won on Eastern tracks and \$67,540 was won on Eastern tracks.

esult of the improved quality of flesh out of which they manufact. The greater portion of the beef cause the whole matter is taken from a

I have not the article at hand and shall rmy. The Indians are to get \$2.50 each or the ponies and the round-up is now on.

Each time the horse comes into the

estent, do away with the prejudice that estepped upon and the mischief is. This practice also saves horses and dams. It has been my idea for years done. This practice also saves horses from becoming troubled with "thrush," for the disease is noticed at its inception and is then easily cured by application of calomel and the more careful cleansing of the stable.

Don't reject a good mare for brood purposes simply because she is a rank puller on the bit when in harness, says the "Horse Breeder." Such mares are usual. sired when his sire was but seven years of age, and that he was raced until he was looked upon as the fastest son of his sire. He was not used in the stud until sire. He was not used in the stud until he was about nineteen years of age and there can be little comparison of the colts of his earlier and later life, or of those sired before and after development.

What the difference was in the handling of Electioneer at Stony Ford and Palo Maid, the dam of Electioneer was one of that sort. Beautiful Bells, 2:29½, though she took a trotting record of 2:29½ was another.

Alto is not clearly set forth. It is clearly stated that at Palo Alto he showed speed, yet he was about the same age when he was taken to Palo Alto that Abdallah 15 was when he died.

Mr. J. C. Bray of Butte, Montana, who is now in San Francisco looking for good roadsters, says that he hates to buy a horse that has his foretop cut off. "In The summer time," says Mr. Bray, "when flies are numerous, horses whose foretops have hear limed of the got sore eyes because of the war, and was killed before the close or the war. There was little or no opportunity for development at such a time. Only for Goldsmith Maid and possibly Wood's Hambletonian we should have little to show for the horse sired, when his sire was a two-norm of the day are related to the war, and was killed before the close or the war, and was killed before the close or the war, and was killed before the close or the war, and was killed before the close or the war. There was little or no opportunity for development at such a time. Only for Goldsmith when the size was a two-norm of the close or the war. There was little or no opportunity for development at such a time. Only for Goldsmith we should have little to show for the close or the war. There was little or no opportunity for development at such a time. Only for Goldsmith we should have little to show for the order of the war.

A horse is as capable of understanding ion produced the greatest mare sired by what is required of him as a man, if the same care is exercised in his case in rey, a mare that is breeding on in every

development of the sire. Years ago Woodburn sold two sons of Belmont, Nutwood 600 and Merchant 509, the latter out of a mare by Mambrino Chief and the former out of a daughter of the pacing bred Pilot Jr. When sold Merchant, dam by Mambrino Chief. dam by Mambrino Chief, second dam by Grey Eagle, third dam Hannah, a prize winning saddle mare, was valued high

Nutwood has gone to first place as a sire, and his dam must ever be rated as one of the greatest brood mares, yet produced. Her sons and daughters are wonderful progenitors in every line. One daughter of the Mambrino Chief mare, Alice, by Aimont, has become prominent. Nothing new is added but the Pilot blood in the dam of Almont.

Merchant as a young sire in St. Louis Merchant as a young sire in St. Louis sired Monitor, a trotter and trotting sire. Taken to Southwest Missouri in ren years' stud duty he never sired a colt that was a winner, or that was esteemed good enough to start in races. In his old ige taken to Lafayette Co., Mo., he ired Nettlewood, 2:1616, from a daughter of Almont Pilot, and from a pacing-bred granddaughter of Volunteer, he sired Cod Wave that I saw trot in 2:27 as a 3year-old, and that was sold afterward for \$4,000, for road driving. There was no development and very little change of cilmate. There is no doubt that Cash, owhed and bred in St. Louis before he went to the southwest, was quite a trot-

ter. I have seen Monitor trot a 2:20 gait. A. L. Eshbaugh, Festus, Mo, demonstrates his special line. He guarantees stock to be all represented and asks the public to investigate he compared to investigate the opening of the August meeting at Saratoga. Hudson & Gatcomb won heroly jennets ready for delivery.

Great activity is again the rule at Lathrop, Mo, where so many horeses in the course of thosunand horses and mules were prepared for shipment to South Africa during the Boer war, Overlen thousand horses and mules are localized in the pens at that point, and shipment to four thousand horses and mules are localized in the pens at that point, and shipment defined for purposes of war, but will be used to restock the farms in that section.

An Oregon firm has closed a contract with Major H. P. Myton, Indian agent at Fort Duchsen, Utah, for 5,000 Indian points running wild on the Uintah reservation. The Portiand packers expect a abig boom in their beef canning trade as the result of the improved quality of horse flesh out of which was man and deductions are correct, but behave flesh out of which was passed in the wind horse flesh out of which was published in the RURAL WORLD, should attract of horse flesh out of which they manufactory and the contract of the course of the ner. I think he was faster and better gailted than the New York horse; both have left a decided impression on the trotting families of to-day. There is little doubt that if Hambletonian and Volunteer had spent their lives in Kentucky wiere the pacer had been forced by the improved roads in the older states and where every breeder was using it, in combination with other blood to secure a more perfect saddle horse, they would have been the two first horses to secure a draught blowing directly on the horse. recognized that speed came from such should not be hurried.

mares as Black Rose and the Busch 8. Be careful not to overload, as the mare and when the latter produced to the cover of Mambrino Chief Blandina he sold her colts to head stock farms with the colts to head stock farms with the colts are the colts.

Editor RURAL WORLD: It may ap- to hang on him. pear strange to find the one who is sup-

THE OLD RELIABLE REMEDY



poor pagaria tare as me easy tangement that ever more means and many gaves that did the least particle of good. I saved a very fine mane by using same, and you may rest assured that I do not be estimated to exceed the same of the same

o the pony. It gave that almost inquiring sniff, but soon was licking the hand and in less than five minutes had its head resting on Miss Lord's shoulder as if it were testifying in its speechless manner: "I have found a friend of the horse.'

Miss Lord prepared a little leaflet or the "Care of Horses" and had it printed in Dakota for the Indians when she was teaching. The precepts for horse care which it contains are quite as good for the white man as for the red man. Miss Lord very kindly gave Mr. Chubbuck the English copy. It is as follows:

"There are many ways in which we can were the best we had, yet no speed was developed. One reason why the later foals of our prominent sires have developed more speed than those foaled at other periods is that even a partial sucsession of the periods is that even a partial sucsafely trust, as in a friend. No one can

that probably has as much speed as any horse ever produced. That barring accidents should join the 2:00 minute list in den or driven fast for a long distance,



MAIN WAREHOUSE OF ANDERSCH BROS, MINNEAPOLIS, MINN. The advertisement of Messrs, Aldersch Bros., Minneapolis, Minn., who are one of the principal and largest Hide and Fur buyers of the United States, has appeared in this paper from time to time.

The above illustration shows their main place of business in Minneapolis, Minn. They also have other houses at other points.

But variety is the spice of life.

A most excellent lady, and one highly cultured, who is teaching Indians in North Dakota, won our admiration by her devotion to the horse. She thinks if

olts, should not be worked hard; as oth the mother and her offspring will

suffer from the result, in a lack of strength and usefulness thereafter.

12. Colts should not be worked until they have attained nearly their full growth and strength. Otherwise they on become broken down and worn out when they should be in their prime

annoyed in any way. It is not only cr and unjust but is likely to make the

al. The horse's mouth is very sensitive nless spoiled by rough usage, and nould never be jerked with the reins. 22. The whip should be used sparingly 23. Kindness will do more the

easily distinguishes a kind master from a cruel one. A cruel master never makes a good horse

25. Treat your horse as if he were your friend, and he will trust you as his friend. 26. Kindness will win his confidence Cruelty will spoil him.

'A righteous man regardeth the life of his beast; but the tender mercies of the wicked are cruel.'—Proverbs 12:10." If the horse could always be thus cared for the lovers of this faithful an would not be so righteously indignant be-cause of cruel treatment and willful ne-glect to which horses are many times subjected. A horse tied up all day to "stake oats" in a chilling rain will arouse the wrath of any true man.

where every breeder was using it, in combination with other blood to secure a more perfect saddle horse, they would have been the two first horses to secure a hundred or more 2:30 trotters. To-day we have sires young in years that would get speed from mares that either of these great sires would fall on. Mr. Alexander recognized that speed came from such mares as Black Rose and the Busch .

8. Be careful not to left him drink very much while warm.

5. The stable should be dry and light, and have plenty of fresh air, without a draught blowing directly on the horse.

6. Wagon wheels should be kept well greatly ingreased, as a dry axle will greatly ingreased that speed from mares that either of these spread from such mares as Black Rose and the Busch .

8. Be careful not to left him drink very much while warm.

5. The stable should be dry and light, and have plenty of fresh air, without a draught blowing directly on the horse.

6. Wagon wheels should be kept well greatly ingreased, as a dry axle will greatly ingreased that speed came from such mares as Black Rose and the Busch .

8. Be careful not to left him drink very much while will explain. tection as horses tire and make missteps

> Editor RURAL WORLD: At a recent Rich Hill. Mo., Fair Association, the fol-

EARLY CASTRATION. In some sections of the country breed without allowing him a chance to get his wind again. One day of over-driving the castration of colts his wind again. One day of over-driving the castration of colts his wind again. One day of over-driving the castration of colts when wearlings. The reason assigned is the minimum loss incident to the operation called to the average of the college of the minimum loss incident to the operation called to the average of the college of the col Every norseman should state that it contains as he will be benefited by having his attention called to the successes of some of the old sires. He clearly show that the wonderful success of Robert Mcthat the wonderful success of Robert McGregor at 23. Siring the king of all trotograms is not an isolated or exceptional galls.

will wear him out more than a year of work with good care.

In The harness, and especially the inside of the collar, should be kept soft at an early age improves the appearance and stimulates early maturity. The practice is objectionable, as it gives the animal too effectionable, as it gives the animal too effectionable as it gives the animal too effections. general personality of the youngsters. that age to prevent the colt from doing amid such gorgeous scenery, is som mischief. To emasculate a colt at too thing, I can safely say, cannot be se early an age makes it effeminate in gen-eral conformation. The head and neck are delicate, the bones light, and the en-semble lacks impressiveness and person-ality of masculinity. For the market, to develop the most popular form, castra- the distance of about one-half mile, som

# **ROD AND GUN**

Mr. Jeptha D. Howe, general attorne for the Union and Southern Pacific rail-roads in St. Louis, gives the following interesting account of his recent trip, to be wandering here in the horse lot.

But variety is the spice of life.

wishes in going up hill, or in drawing his

load. Otherwise his head as low as he
wishes in going up hill, or in drawing his

James S. Simpson, took Mr. Howe

her devotion to the horse. She thinks if she can teach the Indians to love and treat their horses right she will have done much towards their civilization. The Indians are often most cruel in their treatment of this great friend of the human race. They delight in swift riding adjusted, and have plenty of blankets.

# 17. If there is inflammation, and the injured part is hot, frequent bathing is often beneficial. Hot water is better than



about equally divided in sex and color, blacks and grays, of good quality legs and feet, at Kansas City, Mo., Horse Sale Pavilion, on Thursday, January 22, 1903. This offering is the direct decendants of Trophonius 9026 (16085) and Hondieur 4863 (775.) Dams—Lucrece 7733 (11742), Actrice 7709 (11020). If you trace the bloodlines of this stock you find it of the very best, and I am especially ple to offer to the breeders this superior stock of i viduality. For catalogue, address J. W. SPARKS, B. F. BOLAND, Aug. R. D. ROSS, Carthage.

# THE FRISCO LIVE STOCK CO.,

INCORPORATED UNDER THE LAWS OF MISSOURI.

711 Commonwealth Trust Building. St. Lou Breeders and Dealers in Thoroughbred Angora Goats. St. Louis, Mo We can farnish prospective goat buyers with land and goats in any quantity along the Frisco railroad Description of Misseari. These lands can be had at very low prices, ranging from two to

in the Usark Mountains of Missearl. These lands can be had at very low prices, ranging from two to six dollars per as re, in large or small tracts.

It is a subject to the profit to see made from goats in the production of mohair and mutton, the clearing of this lead by the profit is greatly enhance the value of is, thereby adding another profit to the industry, which amounts to sain greatly enhance the value of is, thereby adding another profit to the This company has some very choice lands, we not on the mohair and the mutton.

This company has some very choice lands, we not continue the being cleared, would make very dealrable fruit and agricultural lands. We solicit correspondence. Address

THE FRISCO LIVE STOCK CO.,

711 Commonwealth Trust Building,

A. B. HULIT, Mgr., Ozark Hotel, Springfield, Mo. ST. LOUIS, MO.

# M. L. AYRES' PERCHERONS

My October importation now in my Shenandoah Barns. 100 REGISTERED PERCHERONS on the farm; 75 STAL-LIONS. Most of them ton horses. Come and see them.

M. L. AYRES, Shenandoah, Iowa.

RAVENSWOOD HERD OF SHORTHORNS. LAVENDER VISCOUNT 124755, Champion Buil Two Years in Succession. Winner of the Armour Trophy for best buil at the Kansas Cityshow of 1900 and grand champion over all at same show, also grand champion over all at the Chicago International of 1901 heads her sealated by the Cruickshank Victoria buil Royal Hampton by Merry Hampton. Bulls and helfers for sale. C. E. LEONARD & SON, Bell Air. Cooper County, Mo. Ed. Patterson, Manager. Telegraph and shipping station, Bunceton, on Missouri Facific Ry

# ST. LOUIS NATIONAL STOCK YARDS.

THE LIVE STOCK MARKET OF ST. LOUIS. Located at East St. Louis, directly opposite the city of St. Louis. Shippers should see that their stock is billed directly to the

National - Stock - Yards. C. G. KNOX, V.-Pres. C. T. JONES, Gen. M'gr. L. W. KRAKE, As'st. Gen. Mgr.

FOR SALE.—40 Registered Shortborn Heifers from 6 to 8 months old—good ones—at farmers' prices. Young Mary, Rose of Sharon, Josephine, Phyllis, etc., families, and sired by Lochiel 119976, Scotch Minister 117294, Scotch Steward 178367.

# CLOVER LEAF FARM.

SCOTCH COWS and HEIFERS of the Butterfly's. Violet Bud, Princess Royal families and Scotch-topped Rose of Sharons and Young Marys, all bred to the Scotch bull Barmpton Royal 122721; also a few high-bred Saddle Horses. Call on or address JOHN HARRISON, Auxvasse, Calloway Co., Mo.

view of mountain scenery that I have ev-er witnessed. We could look off into the Fall river basin and see very plainly then proceeded to walk leisurely away. from 150 to 200 miles; we could see the valley of the Grovont and the canyons of the Crystal creek, covered with evergreens, while the mountains all around at an elevation of 14,000 to 15,000 feet were country such sires as Swigert, King Rene and half a dozen others. None of them developed to a standard record. Her daughter, Barcena, by Bayard, is breeding on and has made it possible to breed such a speed whirlwind as Sir Albert S., that probably has as much speed as any line.

it has ever been my lot to see.

"At noon of the third day we pitched our permanent camp in a little grove of fir trees on an elevation, by the side of galls.

12. The harness should also be made to fit the horse, as he can do his work more easily than if it is simply allowed to hang on him.

13. Blinders and checkrein are needless, and often cruel. If used at all, the check rein should be long enough that the Editor RURAL WORLD: It may apear strange to find the one who is suposed to know only things domestic, such
s are found on the Home Circle page, They had not seen us, but had scented us. I put the lamb, which was about four They were too far to shoot with any ac- m more substance, bone and substantial conformation than when gelded as weanlings or yearlings. Colts give no annoyance until two years old and the operasight an hour before they went over the
houses will have a most satisfactory sale untains at the pass. This drove of elk, good things to eat." ion should not be performed until the thing on the top of a cliff which looked nomal is two years old; then the equine horm of pronounced masculinity is esablished.

It may be be be retorned which leads the said they were elk, but I was from Missouri and he showed me through the glasses about 150 heads sticking up over this cliff watching us. We could see nothing but the neck and head. We traveled straight ahead, they having the wind on us, until we got out of sight, then we slipped around through the mountains until about one-half mile of them, hitched our

HUNTING IN JACKSON'S HOLE, horses, left Mrs. Howe there and proceeded on foot to creep up behind a cliff close enough to get a shot. We were moving along carefully under the cliff watching interesting account of his recent trip, accompanied by Mrs. Howe, into that famous big game resort of Wyoming known as Jackson's Hole, where President Rooseveit is contemplating making a had proceeded to investigate and she had proceeded to investigate and frightened the game. In a few months of the guide said he heard them ments the guide said he heard them traveling close to us and on looking up about 10 feet over our heads there they were passing along. The guide instructed me to wait until one-half of them had passed and then jump right up among them. Just as a big bull elk, with his great, shaggy horns, came marching by I jumped up by his side, when he ran by Horse Owners! Use

GOMBAULT'S

GOMBAULT'S

GOMBAULT'S

GOMBAULT'S

Caustic

Balsam

The Fanny he has produced two of the spreat produced and horse races are the chief fecture of contention stands head and shoulders above any stallion that ever lived that was cut off before attaining his seventhy and horse races are almost like hypnotian. The produced speed of four the prose all speeds all librates of all librates of all librates of this great produced speed to four the produced speed to four the produced speed to four the produced speed to four this produc

ountain, which presented the prettiest want to keep close to me the association

"While slipping around to get on the are there. I found them, saw them, took pictures of them and killed them.

"We traveled very slowly, both from a could not determine what they were, but the guide was so expert that he it has ever been my lot to see. onths old, on my back and carried him

# VALLEY VIEW JACK FARM.



MAMMOTH Jacks and Jen ets for maile-30 Jacks, 20 Jacks, 20 Jacks.

meet prices of any one, quality considered. Have just what we advertise and quarantee stock to be as and can save you money.

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Twentieth Century Horse Book. Method of Handling and Educating the Horse New and Simple Treatment of Diseases by Morgan's Twelve Remedy System. DENTISTRY and CASTRATION A short treatise on attle, Dogs and Chickens, giving diseases and remedier. Two hundred illustrations. Price \$1.50. Until January 1, 1993, copies will be furnished at \$1.00 net cash with order.

DAVID B. MORGAN, V. S., Fayetteville, Ark.

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To close out last edition this book is offered at \$1.00. Send orders to author at No. 8 Exchange Place, Room 8, Boston, Mass.

FOR SALE, CHEAP. One seven-year-old black Jack. Can show plenty of his colts to prove beeiing qualities. Address BOX 77, FREEMERG, ILL.

FOR SALE. 7 choice black Jacks, 14 1-2 to 16 hands; two to t ye re old. Ry R. M. JOHNSON, Polk h., Bolivar, Wo.

Stallions for sale or exchange—I Imp Cleve-iand Bay and 2 Coach Sta don; one 4 year-old; all bay . Edw Frick, Hecker, Ill. FREE ELECTRIC BELT OFFER







# **Home Circle**

AT EVENTIDE.

Baby is going to dreamland. To dream land. To dreamland,
He is a prince in queen-land,
In queen-land, In queen-land.

Secure in his empire He slumbers there
His subjects are faithful.
He knoweth no care, In safety he sleeps While the Mother Queen keeps

While the Motner
Guard o'er the kingly heir.
MYRON B.

at this blessed birthday season, the true Christmas spirit with the Faith and the ftope that the Love we bear to all the race will extend clear across the year ntil it touches another anniversary and thus only will be worked out the salva tion of all mankind.

We extend to all our wishes for a Joy-ful, Happy Christmas.

Written for the RURAL WORLI A RAINY DAY IN THE WOODS.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fracternity. Catarrh being a constitutional treatment. It is a constitution to the disease, and giving the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. F. J. CHENET & CO., Toledo, D. Sold by Druggista. Tec.

it one's very door who could settle one s

ertain fashion, so on with storm-cape, Juno laughed at the faces she made ubber boots, etc., and out into the al-

he violets that open in autumn, scarceby reaching above the earth's surface, that produce seed. In October and November a close search will reveal quite a number of these shy, seed bearing flowers. I have sometimes found an odd one as late as Christmas if we had an winter.

The young bushes of sassafras seem tipped with emerald, so green are the fragrant twigs and buds that cover them. I always associate the sassafras with the discovery of America for I was told, when I saw the pretty little tree for the first time. that a tree like that carried by some mysterious chance to the shores of Europe together with boats,

and by wayside the grass is gleaming with a vernal richness that is absolutely springlike.

The fallen oak leaves, too, have a giint of tawny brightness suggestive, not of the gloom of death, but of the glory of the new life awaiting them, for shall they not crumble into fragrant mould and become, in truth, part of the glowing

\$100 REWARD \$100.

Pan. (Laughed while he sat by the river,) "The only way, since the gods began
To make sweet music they could suc-ceed."
Then, dropping his mouth to a hole in

the reed.

He blew in power by the river. He blew in power by the river.

A collection of multitudinous pipes properly arranged makes that large wind instrument, the organ. The flute was held in great estimation at one time, and contests in flute playing were held at the Olympic and other games. The contestants were compelled by law to wear acts of leather mustle. The pressing of a sort of leather muszle. The passing of this law was occasioned, so the story

golden-rods or purple rayed asters of the goes, by the following circumstance coming autumn?

A favorite flute player who had won the ming autumn?

A favorite flute player who had won
With a misty belt of forest land lying prize several times was determined outdo all his previous efforts, and he self to write, or even read, especially blew so hard he burst a hole in his as the wind is tearing the clouds towards the west in jagged pieces among which shine shreds of pale blue sky?

The rain begins to fall in a fitful. unput the fitter one so outdo all his previous entors, and he self to blew so hard he burst a hole in his cheek. The law was meant to prevent the recurrence of such a distressing a ccleent. It is said that Minerva used to play the flute, but threw it away because

Third, string instruments: In Egypt on every side are pools of laughing the god, Thoth, when he was walking sall upon them like fleets of queer little boats manned by hidden crews of brownles. Through the ravine, coiled in serpentine disa at the base of the wooded hillside, toise were still attached to the shell a swift current of yellow water is tumb-ling and eddying, bearing impromptu rafts of brushwood and leaves upon its bosom.

With almost childish pleasure I push a collection of leafs broaders from the picked up the shell and twang-ded the ligaments with his finger. Imaged the ligaments with his finger. with almost childish pleasure I push a collection of leafy branches from a rock wherein they have lodged and watch them swing into the current and whirl the swing in the strument, afterwards called the lyre. The system of sight in a series of grotesque gyrather and the swing in the strument, afterwards called the lyre. The ligaments with his nager. I make the strument in the strument, afterwards called the lyre. The ligaments with his nager. I make the swing his nager in the strument, afterwards called the lyre. The ligaments with his nager. named Eunomus was challenged to a named Eunomus was challenged to trial of skill by another musician, Aristore April instead of December. In the leart of one cluster of these leaves I ound one short stemmed pale little blosom. As all flower lovers know, it is the listening in rapt attention, flew up and the stellar and the listening in rapt attention, flew up and the stellar and the listening in rapt attention, flew up and the listening in rapt attention, the listening in rapt attention, flew up and the listening in rapt attention. perched on his lyre, and every time the

The lyre passed through many stages of development until it reached the piano-forte which is a string instrument of and at the same time an instrume ion, having the hammer of the rum to strike the strings of the lyre. ALACE MEKEEL SEARING.

Auburn, N. Y. Written for the RURAL WORLD

the shores of Europe together or canoes, containing bodies of men unlike any then known, confirmed Columbus in his belief of finding new countries across the dark Atlantic, and encouraged him to persevere in his endeavors to sail to their far-off shores.

Be that story false or true, the sassabe that story false or true, the sassabe that story false or true, the sassabe that story false of true, the sassabe that story false or true, the sassabe that story false of true, the sassabe that story false of the Home with the countries of the Home with the co

The cloud.

The blue rifts and the moisture was strands of thick white moisture was strands of thick white moisture was strands of snow, ro I hurry homeward, bringing with me many pleasant memories of the dripping woods to wind among the melodies the little housewife is playing softly in the twilight.

ADELA S. CODY.

Louis Co., Mo.

ADELA S. CODY.

DINKLESPIEL.

CHRISTMAS TIME.

One day of all the year Sacred to cheer; To all the world one morn When love was born.
One Star to cast its ray
All down life's weary way; One season for love's sway-Glad Christmas time

One day for thought to roam Back, back to home. One day of all the year For mem'ries dear. One day within the breast To let the sweet thoughts rest on those we love the best— Rare Christmas time.

day to cease the strife Of busy life And find some poor heart, sad, And make it glad. One day that path to tread Where to the lowly shed A star the shepherds led. One Christmas time. -Sunset Magazine

Written for the RURAL WORLD. FEMALE HELP.

Not all of us have our affairs in proper shape to get along well without a wo-man or girl to help wife with the house-work. Some families are like ours—all the girls are boys and mamma has more than her hands full; or she may be weakly, old or otherwise incapacitated

for work. Then there is the girl left, through he these there is the girlest, though not parents misfortune, without a home and those of large families in poor circumstances who need to get out and earn a living for themselves. The two conditions, one needing service and the owner noney, match each other exactly if both master and servant are agreeably dis-

Having served in both positions I feel competent to speak a little on both sides and if I am instrumental in causing two persons to get along better together than they would otherwise have done, I shall have attained one of the objects for which I write.

I was a servant in a place not of my I was a servant in place to a move cover choosing and my master was not a saint and probably never will be. I did many things as I should and many otherwise. I shall only speak of those prop-

areas the dark Atlantic, and encouraged the which gives the content of the kingly below.

While the Mother Queen keep Quard o'er the kingly below.

OUR CHRISTMAS SERMON.

The Christmans assand and the service of the content of the

It is impossible to digest articles of food until they are raised to a moderate ly high temperature. Much of the illness Written for the RURAL WORLD.

ANCIENT MUSICAL INSTRUMENTS.

In very ancient times, before history was written, music passed through three stages of development, each marked by a separate class of instrument. Instru-Written for the RURAL WORLD.

A RAINY DAY IN THE WOODS.

"Such a dismai day!" sighs the little housewife, looking at the rain-blurred windows of her cozy sitting room with a rueful glance.

"Such a delicious day!" I murmur, lying back in the rocker and surveying with great satisfaction the low hangings back in the rocker and surveying with great satisfaction the low hangings with great satisfaction the low hanging house of gray flinging their burden to curth in wind-tossed spirals of himman and splashing metrily on every side.

I close my eyes in dramy contentment only to be confronted by an army of the conseience tells me are ghosts of letters pleading to be macrialized in missions to many patient and long-suffering correspondents! I expectes the heartents of letters pleading to be macrialized in missions to many patient and long-suffering correspondents! I expectes at the patients of percussion: Instruments of percussion: are supposed to be dolest wind instruments instruments of percussion: are supposed to be distant day!" in the oldest, wind instruments the next in order of time cand stringed instruments the next in the dolest, wind instruments the next in the mother of the submit spins of percussion are supposed to be done to receive id.

Latin myth tells us that the first musical soon be der Visards of Vall Street.

"Was wilst du aben?" is der four vords in der English lankvich vot der better processes of existence. A physician con be der Visards of Vall Street.

"Was wilst du aben?" is der four vords in der English lankvich vot der der defiel likes besd uf all.

Some mens vas trying to be self-made, but devende the drum for the purpose of anusing the mother of the gods, invented the drum for the purpose of anusing the mother of the gods, invented the drum for the purpose of anusing the mother of the gods, invented the drum for the purpose of anusing the mother of the gods in the purpose of anusing the mother of the gods in the receive in the throw ords in der English lankvich vot der derived to the four f human system has just so much power in Missouri seems only a day with the water gushing and whirling and splashing merrily on every side.

I close my eyes in dreamy contentment only to be confronted by an army of queer little black specks which conscience tells me are ghosts of letters pleading to be materialized in missions to many patient of and long-suffering correspondents! I exported in missions to many patient of the same principle.

Second, wind instruments: In the myths which tell of the invention of pipes or flutes, both water and wind play upon the, as yet, unfamiliar sight of a rain-shrouded world and lo! upon lawn and taking refuge in the river. Was changed to a reed. Pan pursued her, and as therew his arms about the clump of as he three his arms about the clump of as he three his arms about the clump of as he three his arms about the clump of the summer season could be relished.

This man decuation on greately after ve leave college.

GEO. V. HOBART.

This man decuation on great deal to the turifty wife. Whether the world gives her credit for it or avoided by the systematic and frequent into it is nevertheless true. The business-like young farmer who is blessed in a dishes of soup eaten as hot as they can always the first element of music and the large family of drums and problem.

Nearly every successful farmer owes theory that nine-tenths of the intestinal to the turifty wife. Whether the world gives her credit for it or avoided by the systematic and frequent in the myth which she had hidden, a gust large part. The great god Pan was in love with a nymph. She fied from him and taking refuge in the river. Was changed to a reed. Pan pursued her, and as the true his arms about the clump of as he three his a development of the same principle.

PROTECTION

# WON id sheet. The or ore gold than can years, the time Jas. Boss Stiffened **Watch Cases** are recognized as the standard by all jeweiers. They are identical with solid gold cases in appearance and size, but much lower in price. Don't accept any case said to be "just as good" as the Boss. Look for the Keystone trade-mark. Send for booklet. WILL BEND DENT

# Poultry

ABOUT TURKEYS AGAIN

Mrs. Garside, I have found that here Southwest Missouri, the majority of farmers' wives find that turkeys do not pay as well as chicks, when they really stop to take stock of expenses and prouts. We tried raising them one year, and cceeded in having 16 fine bronze plum aged fellows to reach the "gobbler's es-tate," when one morning in August they started off to the fields, only to return minus one of their number, and the day following it was three missing, so we gladly sold them several weeks before Thanksgiving, as we felt that the cash in hand was better than gilt-edged prices in the future that we might never receive. A friend remarked plaintively some days before Thanksgiving: "I have M the turkeys that I shall put on the mar-ket soon, and this will be the last attempt to raise turkeys, for while I am always

uccessful in raising them, yet they are o much bother, for we only own 80 acre of land and they will range a mile away and often a neighbor comes over to say that our turkeys are in his field, and by the time we get there, they are a mile i some other direction.

Our turkeys were hatched in early April, and had they been young chicks. would have been ready for market in eight or ten weeks, bringing in a good price, and we would have been relieved of the care of them, and had the money or immediate use, while with the turting any profit.

A near neighbor last fall sowed five o ix bushels of wheat broadcast, being it too much of a hurry to wait for the drill and, as it was near the house his wife's turkeys took up every grain as it peeped through the ground.

She was well pleased with the snug sun of money received for her turkeys, when sold, but I figured it out that they didn't bring in but little more than the market

where it i should lose more than is or 20 out of every hundred young chicks hatched. I should indeed look for some more profitable business.

atched 89 young chicks, and when we cook stock of them in the fall found only

ANNIE HOFFARTH. Fowler, Mo.

Mothers will find "Mrs. Winslow's Southing Mysp" the heat remedy for Children Testhing.

At Central Missouri Poultry Show held

Mrs. Pat Wilkerson, Fayette, Mo. ck 1.
Buff Rocks, 72 entries-H. P. Mason,
Fayette, Mo., ck 1; hen 1. 2; ckl 1, 2; pul,
1, 4; pen 1. Boyd Norris, Fayette. Mo..

Son.
Partridge Cochins, 23 entries—J. A. Heether, Huntsville, Mo., ck 2, 3; hen 3;

Dark Brahmas-All to Aaron Williams, Fayette, Mo.

Light Brahmas, 23 entries-Mrs. Nute Robinson, Fayette, Mo., ck 1; hen 1.2; cki l. 2. 3; pul 1. 3; pen 1. Miss Ada Bell, Fayette, Mo., pul 2; pen 2. Buff Cochins, 7 entries—J. A. Heether

ck 1; pul 1, 2, 3; pen 1. Mrs. Nute Rorin the market to buy breeders for re-ckl 1, 3; pul 1; pen 1.

Silver Wyandottes-All to H. Mueller. R. I. Reds-Fred Sombart, Boonville, Mo., ckl 1; pul 1.
R. C. Brown Leghorns-W. H. Briggs,

Houdans-All to Emil H. Mueller, Boonville, Mo. Buff Orpingtons-All to Mrs. W. N.

Marshall, Lisbon, Mo.
English Red Caps—All to Benj. Huber,
& Bros., Boonville, Mo. B. B. Red Games-All to Harvey Gray.

Fayette. Cornish Indians-All to Frank

Furkeys.

New officers elected: Boyd Norris,

New officers elected: Boyd Wilkerson, Fayette, first vice-pres.; John S. Hughes, Fayette, second vice-pres.; C. G. Miller, Boonville, secy-treas. Net show will be held in Boonville. Mo., 1963.

FARM POULTRY.

Editor RURAL WORLD: The average farmer does not recognize the fact that the most profitable crop on the farm is the poultry; yet it is and pays him a the pountry; yet it is and pays him a greater per cent of profit than his cattle, hogs or sheep, and a still greater per cent than corn, wheat, oats, hay, etc. If you ask a farmer why he does not pay as much attention to his hens as he does. the other live stock he will very likely answer you it is "too small a business" for a man to tinker with and that his wife and the girls look after them. If, lowever, he took as much pride in his fowls as he does in his other stock, and provide them with suitable house and food, he would find them almost all profit and very little trouble, and from a min-

Written for the RURAL WORLD.

price of the wheat they destroyed. Whew! If I should lose more than 15

three had been lost.

Clean quarters, plenty of water, proper feed, and an abundance of it, for more chicks die for want of feed than from an over-abundance, is all there is in successfully raising mem with profit, if you have vigorous, healthy stock to begin

PREMIUMS AWARDED.

in Fayette, Mo., Dec, 9-16, 11.

Hitchcock, Judge.
Barred Rocks, 35 entries—E. G. Thoma, cent over the market of last Saturony.
They deny, however, any attempt to corner the market.

J. F. Jennings, Moberly, Mo. ckl 2. D. Bernert, Boonville, Mo. ckl 3; pen 2.
Bernert, Boonville, Mo. ckl 3; pen 2.

Hurkeys, which is the market of last Saturony.
They deny, however, any attempt to corner the market.
Uncertainty, however, is the prevailing feature of the trade. It is admitted that a practical monopoly of the turkey.

Mason, that a practical monopoly of the turkey . 2; pul. market is more easily obtainable this to. Mo.. year than it has been for a good many 1, 4; pen 1. Boyu No., 1, 4; pen 1. Boyu No., 1, 4; pen 2. L. M. Haynle, Nelson., 1, 2, pen 3. Mrs. W. L. Harris, 1, 2, 2, 2, 3, 1, 2, 2, 3, 1, 2, 2, 3, 1, 2, 2, 3, 1, 2, 2, 3, 1, 2, 2, 3, 3, 1, 2, 2, 3, 1, 2, 3, 1,

THE ST. LOUIS POULTRY SHOW. Fanciers will hold its eighth annual show at Ar-

An Oklahoma subscriber who has had twenty years' successful experience, sends the following remedy for chicken cholera: Give one teaspoonful of nitro-

In these days of lively competition it is only by strict economy and attention to details that the poultryman will suc-ceed. Expensive buildings high-priced stock or the newest appliances will not

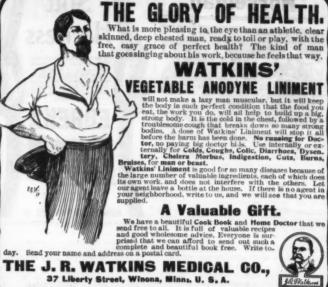
more - all information and valuable book free. Write for it to

JULIUS ANDRAE & SONS CO.,

116 West Water St., MILWAUKEE, WIS.,

MOTHERS Enuresine curse Bed-acting Minorea, or White Wannotte, Illustrated clucular of fowle and buildings free.

St. W. GEER, Parmington, Mo.





PRUSSIAN POULTRY FOOD

FEED COOKER AND ROOT CUTTER.

THE RELIABLE INCUBATOR & BROODER CO., Box 8-15 , Quincy, Mis \$18.60 STEEL

ore consideration. We wish to remind the farmer that he gets more per pound for poultry the year through than he does for any other stock, and that he can find a market for chickens and eggs every day in the year right more profitable business.

With good vigorous healthy chicks, and gentle hens, wet weather cuts little figure in the matter. A few summers ago we manner, and is inferior in every way to that few land when we that few land we were a specific profit of the market in the most haphazard manner, and is inferior in every way to that few land we were a parkets.

house, suitable food and reasonable care and the RURAL WORLD predicts that the returns will bear out the statements made above.

MARIE MERRON.

THE CHRISTMAS TURKEY.

A special dispatch from Chicago to-day Dec. 16th, advises that Swift and Ar-mour are buying turkeys extensively and offering seventeen cents for dressed

that one with sufficient capital might se-cure control of the situation. The pres-ence of big packers in the market is not in itself at all unusual, but the apparent cagerness with which they attempt to bull the market would seem to furnish cki i; pul 1, 2, 2; pen 1. Chas. C. Nebergall, Moberly, Mo., ck 1; hen 1; pen 2.
W. M. Pryor. Fayette, Mo., ck 4; hen 2; ground for the suggestion that manipu

Owing to the scarcity of breeding tur keys in Central Texas unusually high prices are offered for them this winter. The demand on Thanksgiving day re-moved all the surplus and reduced Texas far as turkeys are concerned

West Colesville, N. Y., ck: 1; hen 1; ckl
1; pul 1, 2, 3.

S. C. Brown Leghorns—Mrs. S. M., Taylor, Fayette, Mo., hen 2; ckl 1, 3; pul 1, 2;
pen 1, H. T. Phelps, Salisbury, Mo., hen
1; pul 2, Mrs. J. J. Jennings, Fayette.
Mr. R. C. T. Hallock, treasurer; Mr. J.
Pilcher, as superintendent, will care for

Mo., ckl 2; hen 3; pen 2.

Buff Leghorns—All to John S. Hughes.
Fayette, Mo.

Hamburgs—All to Mrs. S. M. Taylor.

Fighther, as superintendent, will care for the poultry and pigeons.

The Association is to be congratulated on having secured some of the best judges in the country. to-wit: Sharp The Association is to be congratulated on having secured some of the best judges in the country, to-wit: Sharp Butterfield, London, Ont.; Theo. Hewes, Indianapolis, Ind., will judge the poul-try; Joseph Garvin, Boston, Mass., and E. P. Vest of this city will award pre-miums to the pigeons; R. J. Finney, Ma-con, Mo., will see that the Belgian hares B. B. Red Games—All to Harvey Gray,
Fayette. Cornish Indians—All to Frank
Wright, Fayette.

John S. Hughes. Fayette, won all premiums on Bantams and Colored Muscovy
Ducks. Mrs. Nute Robinson, first pair
Cayuga Ducks; John S. Hughes second
Cayuga Ducks; John S. Hughes second
Cayuga Today Gray,

Reports From many states show that a

Cayuga Ducks: John S. Hughes second pair. Emil H. Mueller, Pekin Ducks and Embden Geese. Mrs. S. M. Taylor, M. B. Turkeys.

New officers elected: Boyd Norris, New officers elected: Wilkersen.

CHICKEN CHOLERA REMEDY.

muriatic acid in one quart of water. Give no other water at this time. This is also recommended as a preventive if given twice a year.

K. B. MOORHOUS, Ontario, Iowa.

Reduced Prices—Pure bred p ultry; 28 years experience; shipped forms and engages to almost every state; cat'log. or K. Griffith, Rowling Green, Mo.

FARM TELEPHONES How to put them up-what they cost-why they save you money-all information and valuable book free. Write for it to



EMPIRE STOVE MANUFACTURING CO

The Automatic Sure Hatch [1 30 Days Free Trial SURE HATCH INCUBATOR CO.

DARLING'S CROCKERY GRIT y yard. Specially prepared. Just fits hen perfect See per 100 lb bag. Also Oyster Sats, Clover Meal 22.00 per hundred pound sectivels. DARLING & COMPANY,



OAK PANGES PESANOPRICES TO SUIT SAVE FUEL WORRY ANOTHER MAKE, WRITE TO US. Charter Oak Stove & Range Go



Thurmond's Barred Plymouth Bocks was 4 lats, 12nd and 3 3rds primes at Northeast Mo-Show Dec. 2 to 5, 1982. Brouse Ta 'keys are large and high-scoring. Write Mrs U. M. THURMOND, Leuisiana, Mo.

CHOICE BIRDS FOR SALE Bred right, look right and prices right. Stay White Wyando tee, Pure Duston, Barred Ply, Becks, Monar h Strain. Extrainige bone, well heared. Have pleased others car please you. Stiffsction guaranteed. Mrs. G. F. TERSCOTT, Winseld, Mo dammoth Strain Blue Barred Rocks; Cocks, 11 lbs.; Hens, 8 lbs. to 11 lbs ; score to 53 1.2 points. Occkerels pred from winner; 21 to 25 each. Wrs. J. hn L. Gaiser, Charleston, 111. R. Bocks, Buff and Partridge Wyan-dottes, God birds, low prices for quality. Jas. D. Clarkson, Ballwin, St. Louis Co., Mo.

Barred Plymouth Rocks—Sred for size, lay-ing qualities and standard plumare. Fine a hibi-tion and breeding stock. Beasonable. Albert Gut-gesell, Alfred and Scanlon Aves., St. Louis, Mo. 1882—SATISTACTION—1902. GILT-EDGB strain—Lt Brahmas; S.L. Wyandottes, Fine Oock-creis and Pullets for sale. Right prices. My stock will do you good. H.T. BEED, Camp Point, Ili. Rocky Hill Poultry Farm Breeds,—And has for sale thoroughbred Foultry; Wyandottes a ond Buff Wyandottes at some Buff Wyandottes at Bufferd P. Bocks and Bronze Turkeys, winners wherever shown. Good breeders and exhibition birds at reasonable prices. Satisfaction guaranteed.

JOHN A. Sit AW, Bor 58, McKittrick, Mo.

# The Pig Pen

lem, as it applies to work stock, grow-

knowledge of the feeding question, My knowledge of the feed question the years ago is fairly represented by the lack of knowledge of nine out of ten average farmers. I could not get is the founda h of success upon the results others would report. Some years

I could grow a fine bunch of hogs and make some money. Colts and caives do well, cows and poultry do finely. The next year my pigs would stunt, get fat. next year my pags would stant, get fat and squabby, my coits and calves be fat, but make a poor growth, cows abort, and fowls die with lice and bowel troubles. When I got to the "ninth day" stage of my studies I got my eyes open like a

oung pup, and began to "see things," I found my most calamitous years were those when I had the best corn crop, and my best years when I had less corn and a good grass or pasture year. Indeed, some of the best was where I bought liberally of mill feeds.

I was as afraid of the words "balanced rations" and "scientific feeding" or farming as an old mule is of a nest of

yellow jackets.

I regarded oats as a cash sale crop—
my German neighbor fed his oats to
coits, caives, pigs and laying hens. I fed
or wasted—a goodly part of it) more
corn than he did; his hogs of same age and breeding would weigh from 300 to 359 pounds, mine from 225 to 275 pounds; his

## POLAND-CHINAS.

L. A. SPIES BREEDING CO., (Near St. Louis.) St. Jacob, Ill.,

Have 150-lb. Pigs by U. S. Chief Tecumseh 2d, U. Perfect I Know, Black Chief's Rival S. and Chief erfection 2d S., for \$15. Satisfaction guaranteed. **Bred Poland China Gilts for Sale** 

At Wainst Valley Farm, part of them bred to Chief Perfection 2d A. W. Male pigs that are beau-ties. Write for prices. ERNEST W. WALLEN, Mo. ett. Mo.

## POLAND CHINAS.

March, April and May Pigs All bear the well-anowa Piasa Herd stamp — size, quality and finish J. P. VISSERING. Box 15. Melville, I'il

FOR SALE at reasonable prices P. C's of winter and appring farrow and one good year-ling boar. M. B. Turkey eggs eleven for 8.0 Munger strain. Barred Plymouth Book eggs fifteen for 81.00.
C. H. JONES, R. R. S. Pawnee. III.

POLAND-CHINAS. Gilt-edge pedi-ridual merit combined. R. L. ORGAN 4 SON, Carmi, White Co., III

## BERKSHIRES.

CLOVERDALE FARM HERD Of large English Berkshire Swine and B. P. H Chickens. Geo. W. McIntesh, Monett, Mo

## BERKSHIRE BRED SOWS.

Bred for early farrow; also have some choice coars ready for service. All of best breeding and individual merit. I also breed Shorthorn cattle, Shropshire and Ootswold sheep. All orders given, prompt attention. Come and see or address JOHN MORRIS, Chillicothe, Mo.

DUROC-JERSEYS.

CALLOWAY COUNTY HERD OF DUROC-JERSEY HOGS. A choice lot of Boars ready for service and Gilts ready to breed. B. B. THURMOND & BRO., Auxvasse. Mo.



dry they will be rooting around for the and get frozen during the night. ing young stock, fattening animals, milk cows, and poultry, and very soon I found that over the signature of "Buff Jersey" would be found words rich in a play like young jack rabbits. It brings to my mind my past pig experience, sows

WHAT AILS THE PIGS?

This question is asked frequently of late. It seems to be a stereotyped ques-tion. It is one that cannot be answered to the satisfaction of the questioner at all times.

Pigs get out of fix and it is usually through some disarrangement of the stomach. There are some general rules that should be observed at all times for the purpose of protecting the health of the herd. A profitable hog that is ready and eager to eat must, therefore, be a healthy hog. A great deal of the trouble with pigs and hogs is occasioned by con-stipation. This is the beginning of their oubles that later are not so easily re-oved, says "American Swineherd."

It is therefore one of the first things in looking after your hogs' health to prevent constipation. Of course, a hog may be all right in the bowels and yet be-come afflicted. But it is the exception and not the rule. It takes vigilance at all times to preserve the health of the hog. Adopt cleanly methods about the pens and feeding troughs. Have a dry place for them to sleep in. Don't expose them to draughts in their sleeping quarters. Don't overfeed. Don't make sudden changes of feed. Give them charcoal and shes or charred cobs. Spread lime

omething wrong, and you want to get dim back there as quick as possible. Don't do it by trying to force him to

reventing these allments by careful watchfulness.

FINISHING SWINE ON FARMS WHERE PRODUCED.

to the limits within which it is possible to restrict the same. It would perhaps be correct to say that the general adop-tion of such a system would mean reduc-tion of swine allments by one-half or MONOTORING WINDOW

MONOTORING WI three-fourths, and possibly to even a still

colts at two years old were as big as my they, with one-fourth by weight of bran three year olds, and calves in same prenortion.

they, with one-fourth by weight of bran three year olds, and calves in same prenortion. SCIENTIFIC PIG FEEDING.

Soon after my eyes were opened and my ears unstopped, so I could hear the signed "Buff Jersey" appeals to me with much force. When I took up the matter of farm feeds and methods of feeding upon my farm I soon realized how lamentably ignorant I was. As a business man expecting to make a profit out of my farming venture, there was but one thing to do—inform myself. At once I became an earnest student of the feeding problem, as it applies to work stock, grow-

As to amount to be fed to pigs. I can not say how much; this must be governed by the appetite of the pigs, and the judgment of the feeder must have much to do with learning the limit of their appetites. Most beginners, I think, overfeed. As a rule it is better to err a little in the other direction.

## SKIM MILK FOR HOGS.

Extensive experiments have been co ducted at the Dominion of Canada sta-tion along the line of ascertaining the feeding value of skim milk for hogs. It was found that when swine were fed with meal consisting largely of rye and wheat 4.27 pounds were required to give one pound of gain, but when a similar lot were fed meal of the same character, half the quantity being given in con-junction with all the skim milk they will consume, it required 1.26 pounds of meal for one pound of gain, together with 25.39 pounds of skim milk. When corn was fed in conjunction with skim milk for a period of 100 days it was found that the lot fed corn alone made an average net gain of 98 pounds, while the hogs fed corn and skim milk made an average net gain of 118 pounds. In this instance it required 4.16 pounds of corn alone to make one pound of gain, while in the other lot it required 2.90 pounds of corn and 2.31 pounds of skim milk to make one pounds of increase says The Live Stock Indicator.

As a result of the above experiments it was concluded that skim milk may fam the largest part of the ration for young and growing pigs with advantage and impunity. For the fattening of swine weighing on an average of over 150 pounds it is economical to give an allowance of skim milk not exceeding five pounds per day. In every case the swine fed with part of their ration of shes or charred cobs. Spread lime skim milk were lustier, more vigorous roughs.

When a pig is off his feed there is omething wrong, and you want to get for pound, skim milk was conceded to be worth from one-sixth to one-fifth as much as a mixed grain ration.

and if he gets sick the percentage of exceptions are small.

The sick hog is an unprofitable hog. If you doctor him it costs money, it costs time and it causes loss of gain in the hog. It takes a great deal of extra feed to get him started again to the point where his health failed him. Therefore it is far better to spend a little time in preventing these, allments by careful and the simulation of the properties of the simulation of the sim ment was immediately noticeable, says
"Twentieth Century Farmer." A second
treatment of the same nature the following day completely cured the hogs and
not one was lost. In connection with
this hog malady talk there seems to have
been a great deal of exaggeration. Dr.
Conaway of the Missouri Agricultural Once more we call attention to the wisdom of trying to grow on our farms the swine that are finished on the same. Until this question receives the attention which its importance deserves the prevalence of disease will never be reduced to the living within which its mystight is possible. know very little of any serious hog sickness, if there is any.

## DUROC-JERSEY.

The eleventh annual meetings of the National Duroc-Jersey Record as ocia-



SELLING PRICE OF HOGS

A young breeder, who has this season imbarked in the business of breeding wine, writes us asking about prices nethould charge for phys. He informs us that he paid \$100 for the sire that heads herd, and that his sows have cost him on an average of \$50, one bringing \$100 at a public sale bred to a very prominent. his herd, and that his sows have cost him on an average of \$50, one bringing \$100 at a public sale bred to a very prominent boar, says the "American Swineherd."

pigs. They usually conclude that if the sire was worth \$100 and the dam \$50, that the pigs should be worth \$75. At least that their best should be worth that

as been asking too high prices or not.

We know some very good breeders who nake money in the business who made a practice of paying \$75 and \$100 for a sire, sometimes \$150, and select from their own herds good sows that would be worth \$50, perhaps, in a good sale, but they did ot think of asking more than \$25 for the ordinary good pigs. Of course, if they have a crackajack and a phenomeal good one in individuality, they would sk \$50 or more for it, and they are suc-

business for years.

While now and then a phenomenal good pig is produced, a young breeder is too apt to form the opinion that his mating will produce as good as the best and that he should receive prices that old breeders who have built up a reputation should get. But it is not reasonable to expect this. It is not practical to expect it. It does not happen more than once among a hundred, that young men engage in the breeding business will jump right into the front. Once in awhile an exceptional well qualified young breeder will appear, who is well versed in pedigrees and a skillful feeder and developer and which is going to waste; therefore, and the proposed in the pro breeder who combines these require- settle for themselves what is equitable can secure.

If a young breeder should make a show stuff win it brings him to e front with a reputation quickly and enables him to get, especially for the winners, their worth. We are acquainted with a number of instances where young breeders going into the show ring and winning the best honors sprang at once into the front rank and were enabled to sell their good stuff at as good prices as

at. On the other hand, take away his seed and if constipated give him a physic. Look out for worms, prevent lice, provide him with plenty of fresh water, plenty of salt and ashes, plenty of range are afflicted with the so-called "strange new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "reported a few days new hog disease," reported a few days new hog disease, "repo alue on this, and a young breeder ha ss of this than a successful older breed-

We would advise comparing with others establishing prices, putting a few of our good ones in somebody's sale so a show what you can do; force them if ou have good stuff to put a price on it the sale ring where it will be compet-ifor. There is nothing that will bring etter insight and judgment on price than to attend the sales and visit the dif ferent breeders, keeping your eyes and ears open and your mind active. You will get pointers and information that will be valuable to you and more than

## PIGGY AND THE WEATHER.

Many times during the severe rains of he fall poor piggy, that had no shelter day or night, was seen trying to gather p some dry material to carry to a shel-ered spot where a dry bed could be nade. Was doing this because instinct old him that he is sensitive to cold and

Kankakee swamp. He expects before

refused offers of \$100, and some of \$125 because it is worth more to him in workThe sales have not started off with the
oromptness that he anticipated, and he
has the very heart of Jasper county, Indow appeals to us to know whether he er itself, nineteen miles south-an age We believe that it is a common thing rith young breeders to overprice their igs. They usually conclude that if the ire was worth \$100 and the dam \$50, that framework of 160 two-story farm he and outbuildings, 160 barns for these tene-ment homesteads, eight district school buildings, a half-dozen great store barns and granaries, and a good percentage of and granaries, and a good percentage of the ties used in his railroad construction, besides unlimited fuel. Gradua by the cultivated area has increased. Last year it was 18,000 acres. This year it will prob-ably run to 20,000 acres.

sk \$50 or more for it, and they are sessful breeders and have been in the he has a neighbor who has pigs averaging from 100 to 125 pounds for which he has A Nebraska subscriber writes us that

rees and a skillful feeder and developer and which is going to waste; therefore, mblined with business enterprise. He can afford to allow these hogs to run ets right to the front. It requires panence, thought and judgment that usualcomes from experience and practice. not to be difficult for two neighbors to ents for a few years to get 25 per cent between man and man under such circumstances. The man who owns the catcan afford to put pork on these hogs for less than 3 cents per pound and is just that much ahead, while the man who has the hogs can afford to pay 3 cents as under ordinary circumstances it would cost him that in corn and bother in feeding besides. We suggest, therefore, that there would be no particular wrong done if he charged the owner of the hogs anywhere from 75 cents to 90 cents per month, depending on the gain the hogs were making. They should gain thirty pounds a month each on that feed and both parties are making money by the

> Roots play a valuable part in the winter feeding of swine. While they are not particularly nutritious, they serve to give variety to the ration and keep the hogs in good condition. They are of especial vale for feeding young and growing pigs. Roots should be used much more than

# The Shepherd

MISTAKEN KINDNESS.

me acts of mistaken kindness in the nanagement of sheep. The good feeder is desirous of giving his sheep the very best care and in order to bring this about he is quite liable to feed the wrong feed, feed it in too large quantities and to louse them too closely at a time when ousing should not occur. Plenty of food a good failing in caring for any kind. stock, but what would be good feed stock, but what would be good feed we made a few racks using 2x4 inch a hop would not answer for a sheep, is very well to keep some kinds of sot; in Field and Farm.

We made the sides to the feeding floor

We made the sides to the feeding floor

Well bred Spanish milch goats may

Warm Feet While Driving No more colds, chilis rheu-matism or pneumonia, due from exposure or cold feet while riding. The Clark Carriage Heater "THE HEATER THAT HEATS" and burns the Clark prepared coal without flame, amoke or out.

and burns the Clark prepared coal without flame, amoke or out.

cent for eight hours ride. Chesperthan doctor bills. Send for calalog.

CHICAGO FLEXIBLE SHAFT CO., 137 La Salie Ave., Chicago.



SHORTHORNS AND BERKSHIRES for sale. Year Bull, Red, by Duke of Lawndaie 4th, 137623. Dam Wild Eyes 44th by Waterloo Duke, 89,413, tracing to Imp. Wild Eyes 34th by 14th. Duke Oxford, year roan bull by Duke of Lawndaie 4th, dam Constance of Peabody 8th, by the 31,080 Kirklevington Duke of Wooddaie.

Sirklevington Duke of Wooddaie.

Duke of Wooddaie.

3-year-old Herd Boar Lord Charmer 2d, 54905, dam Charmer 4th by Longfellow.

3-year-old Herd Boar Lord Charmer 2d, 54905, dam Charmer 4th by Longfellow.

3-year and spring Gilts, mostly by Lord Charmer 3d. Dams, Duchess, Lee and Nora Sown 2rd are being bred to Lord Lee, Harris and McMahan's Champion Show Boar this year and Premeer Luke of Peabody, a Gentry bred pig of great promise.

This offering is of good quality and is worthy the attention of any one wanning anything is titls line.

Call on or address.

J. K. KING.

Marshall, Mo.

# Top Poland-China Boars.

Three choice fall Boars and a number of March and April Boars aired by these Top Boars: Ohief S. Victor, T. C. S. U. S. 3d, One Price and Dewey Express. This offering is the largest, growthiest pigs I ever raised; lots of size, with quality and heavy bone. I can recommend them. I will treat you fair. Write or call and see them. I will take a few high bred top sows to the service of Dewey Express at a

M. RICH, Flanagan, III.

# POLAND CHINAS

30 mi. E. K. C. E. E. AXLINE, Oak Grove, Mo.

# FINE BERKSHIRES

of the best families at farmers' prices. Write for what you want, or, what is better, come and inspect the stock. W. H. KER, Prairie du Rocher, ills.



MOORE'S HOG REMEDY

Prevents and Cures Disease.

MOORE'S HOG REMEDY

# THE ORIGINAL HOG DIP AND FEED.



# PREPARED EXCLUSIVELY FOR HOGS.

MOORE'S HOG REMEDY Kills Lice and Cures Mange.

MOORE CHEM. & MFG. CO.. 1501 Genesee St., Kansas City, Mo.

the posts is thirty-four inches. Last year less prolific breeder it is. They seldon

# The Markets

WHEAT-By sample delivered: No.

OAT8-By samp'e del.: No. 2 at 32%c. and choice at 34c. No. 3 at 39@3914c. No. 4

weights on No. 2, and at 46@461/2c for No.

FLAXSEED-Nominal at \$1.12@\$1.13. BRAN-Quotable E. trk. basis at 680 in bulk and 7tc in large and 73c in small sks; mixed feed at 76077c in 100s and mids at 78690c, according to quality. At mill bran sells at 73675c, and ships at 85

HAY—Quote: Timothy on E. side— Choice \$15; No. 1 \$13.50@\$14.50; No. 2 \$12@ \$13; lower grades at \$9@\$11. Clover at \$12.50@\$13 for No. 1, \$11@\$12 for No. 2; light clover mixed \$12.50@\$13, and heavy

arraw—Wheat 35; rye \$6.50 for new and \$7@\$ for old.

WOOL—Missouri and Illinois—Medium

combing and cloth mxd, 20@20%; clothing 19@19%; low and braid 17%@18; burry and clear mixed 17@17%; hard burry 11@12; fine 18@19; heavy fine 13@15; light lamb 171/@18; heavy and coarse lamb 15

COTTON-Spot market unchanged. Sales none. Quote: Ordinary 6 13-16; good ordinary 7 7-16; low middling 7%; middling d middling 8%; middling fair 9% BUTTER-Firm Quotation: Cream BUTTER-FIRM. Quotation: Cream-ery—Extra 30c; firsts £625c; seconds 23@ 34c. Dairy—Extra 21@25c; firsts \$18619c; grease 4@5c. Ladle packed—Extra 18@30c; firsts 17@18c. Country-Choice fresh 16c;

EGGS—Current receipts 21@22. Receipts 394 local; 89 through and shipped

CHEESE—Twins 13c; singles 134c; Daisies 134c; Y. A. 134; Long Horns 14c; Limburger 114:@12c; Swiss 14@15c; brick

LIVE POULTRY-Choice turkeys at 14 @14%; mixed chickens, hens and young 8%c. Old roosters 4c. Ducks 12c. Geese 8c. Live pigeons and squabs per doz.,

APPLES-Per bbl. from cold-storage: Ben Davis, fair at \$1.50@\$1.75; choice at \$1.75@\$2; fancy up to \$2.25@\$2.25; whreten \$2.25@\$2.75; willow twig \$2.50@\$32, according to condition. Bulk at \$2.50@\$32, according to condition. 11.20 per 100 trk. Eastern Baldwin No. 1 at \$2.15@\$2.25, and greening at \$2.25@\$2.40;

GRAPES-Catawba at 20@21c per pony PEARS—Keiffer at \$2.30@\$2.50 per bbl.

CRANBERRIES—Jersey in jobbing way at \$9.75@\$10 per bbl; late varieties

POTATOES-Northern on trk. at 48@

red in bulk and 65@70c skd.; yellow 58c;

-Red at 1%@2c per lb; white 2%@2%c. WALNUTS-Selling at 45c per bu; Call-fornia at 10@10%c for hardshell and 10%@ 10%c for softshell. CIDER-Sold at \$3.50@\$7.50 a bbl.

HICKORY NUTS-We quote per bu. at \$1 for large and \$1.50@\$1.75 for shellbark. SORG. CANE SEED—90c per 100 lbs. SORGHUM—Prime 22@24c per gal. DRIED FRUIT—Evaporated rings at 4c

to 5c; sun-dried quarters 4c to 5c; sun-

ple syrup at 60@90c per gal. GRASS SEED—Timothy at \$2.90@43.50;

ing was quiet, but it was firm in con-formity with the tendency during the week. Commission interests are decided-ly encouraged over the agreeable change which occurred this week. The substan-tial and vigorous demand which emanated from the South was the source of great gratification, and the additional ac-tivity which transpired in relation to the tivity which transpired in relation to the farm demand was another good omen, which caused as much surprise in that it was not generally looked for until

thereafter the market is looked forward ture occupied one entire afternoon ses-

hard sold at \$660554c E. side and turkey worth 71c; No. 4 hard a \$450. CORN—No. 2 yellow sold at 45c; No. 3 eaglier, most of the sales to go to elevator; also, at from 39646c, mainly at 39½c. Exporters and shippers to interfor points, including Chicago, paying 4064ic, destination, weights; No. 4 sold at 35638c. the east sent its share of support; in fact, the business was heavier than last week, that each farm should be an experiment but on account of the slow sales made on the commission market salesmen were of. That the farmer must be affect to

ADDITIONAL MARKETS ON FOURTH
PAGE.

SHOULD THE GOVERNMENT BUILD PUBLIC ROADS.

that are feeling upward for air. tablish post roads, as post offices. The Constitution requires Congress to "establish post office and post roads" and to provide for the common defense and general welfare of the Un'ted States." When the Constitution was framed and adopted. Sept. 17th 1787, rallroads were not in ex-latence, and in 1790 there were only sev-enty five post offices in this country, and less than 1900 miles. Bo says the Baltimore "American."

while I am not a legislator, and have no definite plan of action, other than this: I think there is more law in favor

Thursday night Prof. F. M. Umbo of; and a greater need of a bureau of irrigation and public highways, than that poor to fair 10@15c. Renovated-Good at of agriculture. While I would not dis-card the bureau of agriculture, I would most assuredly add that of the public

highways and irrigation.

Let the government do this: Take the lead in this all-important matter, make appropriaions for this purpose, the same as that for the improvement of water transportation, and the desired end will transportation, and the desired and win be accomplished. To illustrate: The government has made appropriations, and spent enough money on the western border of this state, to improve the Mis-The souri river for transportation, by using a vast amount of wire cable and willows: called "wicket work" (most of which is now in the river acting as a dam, and retarding the free course of the water) to have built seven turnpike roads through the entire state of Missouri. Now, suppose appropriations for this purpose had been given and these lasting improvements made, what would it have added to this commonwealth, and to the entire country?

civilized this will be the result J. Y. POWELL

NOTES FROM PETTIS CO., MO.

Editor RURL WORLD: It has been a long time since Pettis county has been heard from. I have been reading articles in your paper from people over quite

and the same the same that took it first were over it before the last ones took it. They

I have read quite a little about oats and pea hay being good for milch cows, but have never seen any. Are the peas spoken of cow-peas, and is it hard .o harvest?

harvest?

I want to put in some rape this community of the surple syrup at 60,690c per gal.

MAPLE SUGAR AND SYRUP—New ing spring for my hogs. How early can it be sown?

Wheat is scarce in this part of the

country. It was too wet in Septen clover at \$7.50@\$10; new redtop at \$1.25@ and did not dry up early enoug. in October, until it was too late to sow it. HORSES—The horse arrivals were I can heartily second Mr. Powell's artipractically nominal; no full loads were reported, but only a small consignment roads in this country do not need brick

OKLAHOMA INSTITUTE WORK.

Edior RURAL WORLD: -The past two weeks we have been having Institutes in many of the counties of Oklahoma. Most of these Countly Institutes have in hand the making of a state board of agriculture. To-day Kay county, of which I am proud to be a resident, begins her Institute, and on the 18th we all meet in Guthrie to elect the State Board.

Among the many institutes held lately much later in the season. The general expectations are that next week will be quieter on account of the holidays, but

The season the general is the old reliable, the Salt Fork Valley Farmers' Institute, which held its third at Tonkawa, although it is not a county organization and has no voice in creating the State Board of Agriculture, it is generally the property of the second of of the AT Tonkawa, although it is not a county organization and has no voice in creating the State Board of Agriculture, it is second to no Institute in the Territory. Its meetings are well attended and the interest is keen from start of finish. I wrote the RURAL WORLD of its 1901 the Strope, and ask for "Mrs. Winslow's Boothing Syrpu," and take no other kind. Twenty-five has supported by Drugsists in every part of the soried. Be sure and ask for "Mrs. Winslow's Boothing Syrpu," and take no other kind. Twenty-five has supported by the sure and take no other kind. Twenty-five has supported by the suppo

to live up to the good symptoms manifested this week. The advance in the market has been about \$5 to \$7.50 per hall and later in the streets, and for an

hour or more continued the discussion.

The Thomas Brothers advocated thin side at 73674c for car lots; No. 3 red at 16678c. E. side and fancy worth 78c; No. 2 hard sold at 86684c E. side and turkey worth 78c; No. 4 hard ac 867. E. side and turkey worth 78c;

unwilling to claim that any advantage conditions, quick to decide and firm and and all/ac; No. 3 white at 33635c; No. 4 white at 32633/c, and clips at 33c.

RYE—19c local to 49%c destination, proved. At the close there are no stale is affected by the many conditions of better quality the market would have improved. At the close there are no stale offerings to embarrass the trade of next in like way. week, for although some have sold drag-qualities and habits; know the weeds. BARLEY-Minnesota at 50c. Quote the lingly the clean-up has been about gen-from seed to maturity; know his team. tion of his grain, soil, weather and sea son. The last plowing is one that car

other year.

President John Combest had a liberal supply of RURAL WORLDS and invit- action towards that happy day when man as sample copy of what he believed to be the best paper of all for the farmer. Immediately there was a love feast and from all parts of the room friends of the By establishing "post roads," the farmers of the Constitution could not have
meant for Congress to rent, of corporaRURAL WORLD arose and spoke words tions, at enormous prices, routes over which to carry the mail.

While I am not a legislator, and have subscribers will roll in from Tonkawa

Thursday night Prof. F. M. Umholz, the utmost precision. president of the State Normal, delivered his great lecture, "A World of Opportun-ity With the End Out." Night sessions were held at the University Preparatory School building, that has been complet ed within the year. The school is presided over by President J. H. Kelly, one of those noble young men who can win boys' hearts and inspire them to great effort. One can feel the influence which One can reel the influence which in a year or two will enable strangers to pick the soil of some one element out students of the school. They are food, though the other two are year or two will enable strangers to pick

the cream separator. The afternoon session was taken up by Prof. John Fields, dean of the Experiment Station, who continued the morning discussion of the water) continued the morning discussion of the control o that have made the word farmer almost

box.

BEESWAX—Quiet at 23½c per ib. for prime.

HONEY—Quote: Comb—Dark at 10@ilc; choice at 13@ilc; choice at 14@ilc; choice colorado white at 14@ilc, or at 13.26@ilc, or at 13.26@ilc, choice colorado white at 14@ilc, or at 14.26@ilc, choice colorado white at 14@ilc, or at 13.26@ilc, choice colorado white at 14@ilc, or at 14.26@ilc, choice colorado white at 14@ilc, or at 14.26@ilc, choice colorado white at 14@ilc, or at 14.26@ilc, choice colorado white at 14.26@ilc, choice choice colorado white at 14.26@ilc, choice choic

Will you please put us in communica-tion with parties who can furnish the necessary appliances for such a plant, to cost, say, \$30,000, and not to exceed \$40,000, complete and ready for operation.

W. E. CORLIN.

Jerseyville, Ill.

TENNESSEE NOTES.

Editor RURAL WORLD: Our- fallsown grain, both wheat and oats, are in excellent condition for winter. A full average of acreage is sown. We had the nicest fall and early winter weather reported, but only a small consignment of two first on the business. The closof two. The trade was featureless; no paved wheel tracks or gravel, but dirt hus far that any one should wish for.

And yet many are not ready for the unthad previously been cleaned up and there hear from Bro. Lawson and Bro. Lyon
often.

OKLAHOMA INSTITUTE WORK

OKLAHOMA INSTITUTE WORK ercury registered 24 degrees above zero the second time of the season that mercury dropped that low. Price of wheat. S7c; corn 50c. No oats on the markets. Frish potntoes, 75c; sweets 50c; butter 18c per lb., and eggs 17c per dozen; hens, per b. 6c cash and 614 to 7c in trade: flour 34.25 per bbl; granulated sugar 17 lbs. for \$1, and good roasted coffee, in bulk, 9 lbs for a dollar; dressed pork, \$6 per 100 lbs; dressed beef 5 and 6c per lb., for fore

and hind quarter respectively.

THAT GIANT CASTOR BEAN.—Well. to, Mr. Byrne, the mustard seed "isn't in t." Nor that castor bmean either. While traveling in Los Angeles Co., California, some years ago, "mine host" pro-posed to drive up Sweet Spring Canon in the San Gabriel mountains. large castor bean plant-tree, I'll call it-

WANTED-FAITHFUI. PRESON TO TRAVEL for well established house in a few counties, calling on retail me-chants and agents. Local territory. Salary 31694 a year and expenses, pay able 513.70 a week in each and expenses advanced. tion permanent. Business successful and ing. STANDARD HOUSE, 334 Dear-

The vast possibilities of plant breeding can hardly be estimated. It would not e difficult for one man to breed a new rye, wheat, barley, oats or rice which yould produce one grain more to each head, or a corn which would produce are extra kernel to each ear, another potato to each plant, or an apple, plum, orange or nut to each tree. What would be the esult? asks L. Burbank in the "Inland orces of Nature would produce annually without effort and without cost: 5,200,000 extra bushels of corn

15,000,000 extra bushels of wheat, 20,000,000 extra bushels of oats. 1,500 000 extra bushels of barley. 21,000,000 extra bushels of potatoes But these vast possibilities are not alor PUBLIC ROADS.

Editor RURAL WORLD: —In reply to your inquiry will say I have formulated no definite plan for the improvement of public highways, by the general government, only this: Under our constitution, it is as much the duty of Congress to establish post roads, as post offices. The ose are unconsciously felt even by ose who do not appreciate them con-ously, and thus with better and still etter fruits, nuts, grains and flowers will the earth be transformed and man's thoughts turned from the base destru

> breeding plants may be brought into existence which will do better work always appointed work better, quicker and with

> > TOPDRESSINGS

The general principle of topdressings i to supply certain elements of plant food which have been exhausted by continued cropping of the soil. Crops contain more of one ingredient of plant food than of the others, for example, and cropping year after year may result in exhausting out students of the school. They are even now beginning to walk, talk and act alike—in imitation of the man they love.

Friday morning session was given over to the discussion of country schools and the cream senarator. The offence of the plant-food that all three of the plant-food the gram senarator. ingredients—nitrogen, potash and phos-phoric acid—are equally necessary, and that a shortage of any one will lessen dean of the Experiment Station, who continued the morning discussion of school and emphasizing the point made of one ingredient than of the others, i that have made the word farmer almost synonymous to ignoramus and foot.

The Institute also passed strong resolutions endorsing the idea of township schools and free rural delivery of mails, and in favor of a memorial to the Territorial Legislature to pass a bill making an appropriation for use of the Experiment Station in preparing and distributing black-leg vaccine.

Friday night Prof. A. C. Scott, president of the Agricultural and Mechanical manure applied each year amounts to North Missouri at 250/45c, according to condition; white 750/90c. according to sweed enough to write a few lines to your paper. The past week the weather 75c; Nansemond at 750/90c for yellow to 550/90c for red; queen at 550/90c per bu. Earth" is covered with a coat of snow, and the deep mud beneath makes travel-box.

See the extent of country, and became interested enough to write a few lines to your paper. The past week the weather has been very bad and now "Mother College, Stillwater, O. T., gave his lecture. "Benefits of Education for Young and the deep mud beneath makes travel-box.

See the condition; white 750/90c, according to ested enough to write a few lines to your paper. The past week the weather has been very bad and now "Mother College, Stillwater, O. T., gave his lecture. "Benefits of Education for Young and the deep mud beneath makes travel-box.

See the condition; white 750/90c, according to ested enough to write a few lines to your paper. The past week the weather has been very bad and now "Mother College, Stillwater, O. T., gave his lecture. "Benefits of Education for Young Men Who Expect to Remain on the Should all this point food prove avail-Should all this plant food prove avail able, the fertility of the soil would be manures is actually realized in crops Hence we have by the above system rea

BEANS AND PEAS—Quote. From store White Beans at \$2.35645.49 for hand-picked pea and \$2.356259 for machine picked. Dried green peas—Scotch at \$1.75; split peas at \$2.15 per bu. and \$7 per bbl.; black eye at \$2; California pink at 3%c per lb.; New York kidney \$6c; Lima beans \$5/4c; lentils \$4/2c; choice at \$65675c.

BROOM CORN—Nominally firm; quote, per ton: Fair \$55600c; common \$40650c; common \$4 acre as it looked or they expected, although it is turning out thirty to seventy-five bushels to the acre.

I have noticed in this county that some pleces of corn are down a great deal more than others. Is there something lacking in the soil? I think there is, but do not know what it is.

I have read quite a little. farm should prove a very interesting winter evening study. In fact, in no oth er way can topdressings be properly justed. It may be that some soils are rich in certain elements of plant food, and top dressings are therefore economical in saving useless applications of plant food not needed. As a rule, however, complete manures or fertilizer should not be used unless the operator horoughly understands the subject.

WHY TIMOTHY IS POPULAR.

Every one is familiar with timothy grass and knows its commercial value when made into hay; but many farmers make the mistake of sowing this grass for pasture, hence a word of caution may not be out of place, says Prof. French in a recent bulietin of the Idaho Experiment Station. Timothy does not make as good hay for

rimothy does not make as good lay loo cattle and sheep as many other grasses It does not make much pasture except in very moist peatty or alluvial soil. For the hill lands it is one of the pooresi grasses we have where pasture and hay for cattle and sheep are desired. It is exhaustive on land, taking away the nat-ural fertility of the soil. rather than restoring it in a measure, as many of the grasses and clovers will do. In a mixture an either.

S.Co., Calihost" prog Canon in
Seeing a
The question will occur, no doubt, why
is this grass so widely sown?

I took my pocket-rule and measured the Gameter 18 inches above the ground and found it to be 11 inches. I climbed up the tree fully II feet and it would have supported another person of my weight at that point.

P. S. GORMAN.

THE POSSIBILITIES OF PLANT BREEDING.

THE POSSIBILITIES OF PLANT BREEDING.

THE POSSIBILITIES OF PLANT BREEDING.

The possibility of the America," by Prof. New Deads to permit the present practice of butchering off such a stately and beautiful creature as the elk for its antiers or tusks.

So far as they are available for agriculture, and to whatever extent they may be head with the present practice of butchering off such a stately and beautiful creature as the elk for its antiers or tusks.

So far as they are available for agriculture, and to whatever extent they may be reclaimed under the national irrigation are reclaimed to the reclaim are reclaimed to the recl

thus far in cultivation." thus far in cultivation."

There is one fertile reason, it seems to law have been so perverted from the intended and that is its adaptability to new land to permit the acquisition of large areas. Arthur factors are the commutation clause of the homesteau writers best more than the commutation clause of the homesteau writers best more than the commutation clause of the homesteau writers best more than the homesteau writers better than the homesteau writers and homesteau writers are the homesteau writers and hom me, why timothy is so generally grown; tention with which they were enacted as and that is its adaptability to new land and the comparative ease with which a of the public domain for other than academ novelings, including some well-selected poems by such writers as Arthur Stringer, Paul Laurence Dunbar, and the comparative ease with which a

DESCRIPTION.—Catalpa (speciosa) is readily distinguished from the other spe-cies by the following characteristics: First, the tree grows to a much greater height and diameter with a fewer two weeks earlier than other Third-The pods usually come in twos and threes, are quite large, some of them being fully eighteen inches long, the seed being about one-third larger, with the end hairs not drawn to a point as in the common sort. Catalpa (Bignonioides). with scaly bark belong to the less valuable species. Fifth—Catalpas do not leaf out until quite late; the leaves drop with the first hard frost. When in full leaf the color and size of the foliage produces a tropical effect. DURABILITY OF THE WOOD.-When

citing cases where the wood from well matured trees, grown in the Wabash valley lasting more than fifty years. The wood from young trees will not last so long when in contact with the ground, yet we have data enough to assure us that young catalpa will outlast the best oak. I have used young catalpa posts since the spring of 1894, and they are still in good condition, November 10, 1902. Late summer and early winter is the best time to cut post and pole timber. Catalable for all inside as well as outside work. It is especially beautiful for interfor finish of railroad cars, making one of the most artistic pieces of woodwork to be found anywhere. For furniture it cannot be excelled; however, it is a little fight in color for some uses. It will be sought after for interior finish on fine buildings, is almost as easily wrought as white pine and much richer in grain and feet strike it, the floor, I mean, I have color. Young trees can be used for posts, as small poles, rake tongue, hayrack, hoe handles, etc. The wood makes a fairly first stands on one foot and then the small poles, rake tongue, hayrack, hoe handles, etc. The wood makes a fairly good fire, but cannot be compared with oak or hickory for firewood.

SEEDLINGS.—The inferior of many seeds and seedlings, together with the early practice of planting trees in the permanent plantation 4x4 feet, has in the permanent plantation 4x4 feet, has caused more trouble to tree growers than caused more trouble to tree growers than the permanent plantation for the property of the gather, many seedsmen have sold such seed as Catalpa (Speciosa). In 1885 I planted 100,000 trees, they were bought for the tall, erect growing tree, when to my surprise, fully one-half are the common scraggy sort. Great care must be taken in gathering the seed. Of late years I only buy my seedlings from a nurseryman who gathers all his own are considered to the control of the seed.

has averaged 500 feet per acre for each season's growth. I admit the fact, but we must remember the lessons we have learned and paid for during these twenty learned and paid for during these twenty.

Union Co., Mo. Kansas are now on an average of twentyone years of age, and should be produc-ing four times their present rate of lumber making. They are ony at a point where the growth is fine for posts and small telephone poles, while they should be producing large poles and railroad ties. These forests are not situated on the best land, it being at the time of their establishment a high open prairie with no protection from the prevailing south wind during most of the growing season.
At the same time we have many thousand of Catalpa trees growing in Kansas that will average one inch in diameter for each season's growth since they were

planted as seedlings. POST AND POLE STOCK I believe the development of the middle West dur-ing the next twenty-five years will call for millions of posts and small telephone poles for the progressive farmer, who nust of necessity be connected with the local telephone company at his county seat. The lasting qualities of the Catal-pa make it especially valuable for such purposes. It is one of the easiest trees grown, and I see no good reason why millions of them should not be grown for

THE PRESIDENT'S MESSAGE

In his last message President Roosevelt

"Few subjects of more importance have been taken up by the Congress in recent years than the inauguration of the system of nationally aided irrigation for the arid regions of the far west. A good be-ginning therein has been made. Now that this policy of national irrigation has been adopted, the need of thorough and scientific forest protection will grow more rapidly than ever throughout the public land states.

Legislation should be provided for the

Everybody knows timothy hay and cannot be easily misled in judging of its serves. The senseless siaughter of game, which can by judicious protection be pergrass, oat grass, yeg grass and many others, are little known, although they may serve for the people as a whole, should be stopped at once. It is, for instance, timothy. The following statement from protection of the game, and the wild

Ing kind in mixtures, whether for pasture or for hay, or used alone or otherfise, settler who lives on his land, and for no and I place it far in advance not only of one else. In their actual use the desert timothy, but of any other grass we have land law, the timber and stone law, and the commutation clause of the homestead writers number over thirty-five of the and the comparative ease with which a stand can be secured. The seed is easy to obtain and it grows readily, many times under adverse conditions.

PROFITABLE CHARACTER OF CATALIPA (REFECTORA) ranges has of late led to much discussion as to the best manner of using these public lands in the west which are suitable proprietor of Blue Rock Poultry Farm, is nomesteader, is allowed to use the arable land. One hundred and sixty acres of fairly rich and well watered soil, or a much smaller amount of irrigated land, some prize winning rose comb brown may keep a family in plenty, whereas no Leghorn cockerels for sale. He gives his birds intelligent care and understands the may keep a family in plenty, whereas no noe could get a living from 160 acres of dry pasture land capable of supporting at the outside only one head of cattle to eyery ten acres. In the past great tracts of the public domain has been fenced in the public domain has been fenced in the public domain has been fenced in the property of the public domain has been fenced in the public by persons having no title thereto, in diby persons having no title thereof, it rect defiance of the law forbliding the maintenance or construction of any such unlawful enclosure on public land. For various reasons there has been little interference with such inclosures in the past but ample notice has now been giv-en the trespassers, and all the resources at the command of the government will hereafter be used to put a stop to such

In view of the capital importance of these matters, I commend to the earnest consideration of the Congress, and if the Congress finds difficulty in dealing with them from lack of thorough knowledge of the subject, I recommend that provi-sion for a commission of experts spec-ially to investigate and report upon the complicated questions involved."

THE EARLY BIRD

Editor RURAL WORLD: Did you ever think how much energy is expended all over the greater part of these United States every morning when the mercury hovers near or below the freezing point? If there is a man, or boy, who likes to tumble out of a warm and cozy bed when the floor is so cold that it sends cicthes on when, with a hooh-h, he makes oak or hickory for firewood.

\*\*BEEDLINGS.—The inferior character of many seeds and seedlings, together which he at once drops as if it were hot.

After sundry efforts and exclamations he

seeds I only buy my second a large train a large murseryman who gathers all his own more serial with much cheaper than to grow my own seedlings.

GROWTH.—During the last twenty at once and do not stop dressing until grow my own seedlings.

GROWTH.—During the last twenty years much has been written about the growth of the Catalpa. I believe for post and pole stock that fairly good prairie and pole stock that fairly good prairie are flaps pulled down, and, if yery cold, and pole stock that fairly good prairie soil will give the best results. Because of the more exposed situations, the trees trike a match, light the kitchen lamp and apply the match to the kindling in grown on richer ground. The sandy bottomland of Eastern Kansas and Western Missouri is an ideal place to grow Catalpa will be soil to be stored in the state, always prepares the kitchen fire ready to light the evening larger of the state of the st Missouri is an ideal place to grow Catalpa for lumber purposes. With proper management the best soil will produce 1,000 feet of lumber per acre for each season's growth; that is, a well-grown Catalpa I light my lantern, take the cinder pan country and a hucket of milks. frowth; that is, a well-global per acre from the cook stove and a bucket of milk forest will produce 30,000 feet per acre in thirty years from the time of plantins. Fost stock can be taken out after the tenth and pole stock the fifteenth year. The skeptic will say of all artificial forest grown in the west not one of them est grown in the west not one of them I get to the house and find all snug and I

Do not think of your faults: still less of others' faults; in every person who comes near you, look for what is good and strong; honor that; rejoice in it; and is you can try to imitate it and your faults will drop off like dead leaves, when their time comes .- Ruskin.

hink that ez soon ez they commence to keep company, they must have ribbon bows tied on their buggy whips—an' I reckon it's in accordance, ef enything is." —Ruth McEmery Stuart.

Have the wild things no moral or legal rights? What right has man to ong and fearful agony on a fellow-crea-ure simply because that creature does of speak his language?—Earnest Seton-

A BEAUTIFUL BOOKLET

The Keystone Watch Case Co., of Philelphia, whose advertisement appears adeiphia, whose advertisement appears elsewhere in this issue is sending out to applicants an illustrated booklet of 34 pages which is one of the most artistic of the year. It exploits the merits of the Jas. Boss Stiffened Gold Case—relates its history, explains its construc-tion, tells how to identify it and warns against the substitution of a "just as good." A folder in the back of the book strates some of the patterns in which

chiefly only for grazing. The sound and steady development of the west depends upon the building up of homes therein. Much of our prosperity as a nation has been due to the operation of the home- her fine, vigorous stock speak of the care stead law. On the other hand, we should recognize the fact that in the grazing patrons to give Mrs. Thurmond a share region the man who corresponds to the

We ask our readers to remember tha

Never before was Mrs. G. F. Trescott Winfield, Mo., so well prepared to supply choice poultry. Her stock is strong, vig-orous farm ra'sel and well matured. Mrs. Trescott has bred a strain famous for its excellent laving qualities and practical application of it in her busi ess dealings.

TIMOTHY, CLOVER AND BLUE GRASS.

Fancy and choice recleaned, homegrown with weed seed. We can undersell anyone, quality to into consideration. Send for sample lad prices can save you money on any kind of seed you. can save you money on any kind of seed you wis to buy. Write for catalogue Address A. A. BERRY SEED CO., Box 10. Clarinda, Ia.

FOR SALE—Some extra good Rose Comb Brown Leghorn Cockerels. H. H. PRERKING Concordia, Mo.

## Eagle Claw Hand Fodder Fork

Only tool invented that handles bound or loss Fodder successfully. Write a d secure exclusive agency Bandleman & Sons, Des Moines, Iowa. WANTED—Position as foreman or furnished farm to work on shares by up-to-date man 35 years old; dierman-American. Address M. E. C., care BURAL WORLD.



Settlers' and Home-Seekers Half Rates Settlers' and Home-Seckers Half Rates, On the first and third Tuesdays of each month to and including April 21-t. 1993, the Mobile and Ohi Railroad will sell one-way settlers' tickets to point South, Southeast and Sou-hwest, including Mobile Ala, at one-half of the r-guiar first-class one wafare, plus \$2,00. On the same days Homescekers excursion tickets will be sold to same territory a rate of one fare, plus \$2.00, for the round-trip. April 70 or 10 o

Mid-Winter Holiday Rates

Christmas and New Year HOLIDAYS. B. & O. S.-W.,

will sell excursion tickets from and to all points on it's line and to principal points on connecting lines, in C. P. A. Territory Decer ber 24, 25 and 31, 1902, and January 1st, 1903, at rate of

ONE AND ONE-THIRD FARE FOR THE

ROUND TRIP.

Tickets will be good returning to and including January 2nd, 1903, For full particulars consult any Agent or address,

O. P. McCARTY, Cincinnati, O.

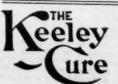
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